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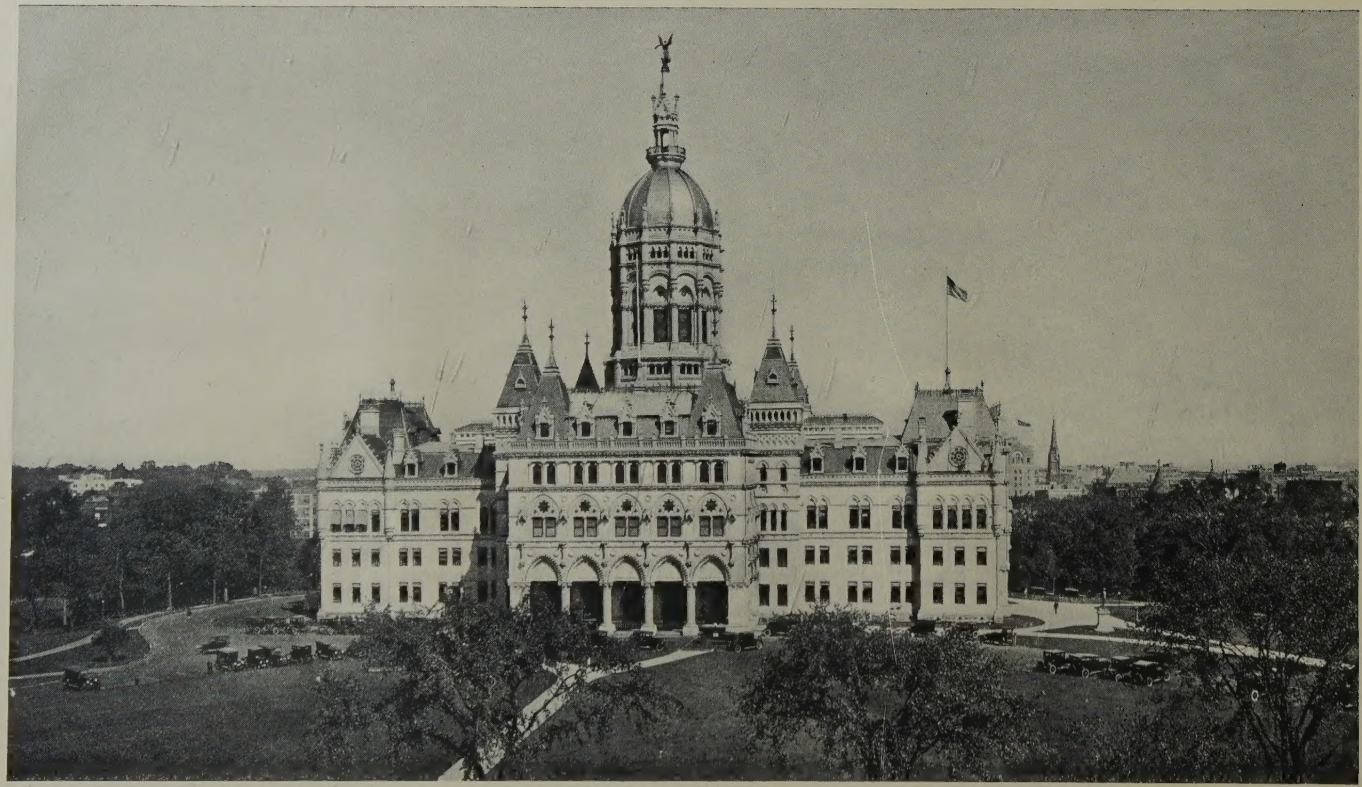

The State Capitol, Hartford, North View. Richard Mitchell Upjohn, Architect.
Completed 1879. Figures on the Dome by I. A. A. Ward. As Originally Designed, a Square Tower Replaced the Dome.

History of Connecticut

In Monographic Form

NORRIS GALPIN OSBORN
EDITOR

VOLUME TWO

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CONTENTS

POLITICAL PROGRESS

PAGE

BY NORRIS G. OSBORN 1

The Hartford Convention 6
Constitution of 1818 8
Conventions 15
Political Parties in Connecticut 19
Anti-Slavery 21
English-Jewell Controversy of 1871 26
The Period of "Peaceful Anarchy" 29
Temperance and Prohibition 33
Woman Suffrage 36
One Capital Fight 41
Other Constitutional High Points 48
Improvements in the Ballot 50
Labor and Other High Spots 53

NEWSPAPERS AND PERIODICALS

BY CHARLES HOPKINS CLARK 57

Hartford County 59
Other Hartford Newspapers 63
The Later Hartford Period 72
Religious and Special Publications 77
Early Papers Outside of Hartford 80
Newspapers of New Britain 81
Other County Newspapers 85
Manchester's Newspapers 86
Other County Newspapers 87
New Haven County 89
Newspapers of Waterbury 98
Newspapers of Meriden 108
Newspapers of Ansonia 111
Other County Newspapers 113
New London County 118
Norwich Newspapers 124
Newspapers of Stonington 132
Other County Newspapers 134
Fairfield County 135
Newspapers of Danbury 142
Newspapers of Stamford 145
Newspapers of Norwalk 148
Other Fairfield County Newspapers 152
Windham County 159
Newspapers of Putnam and Danielson 162
Litchfield County 165
Newspapers of Winsted 169
Newspapers of Torrington 172
Other Litchfield County Newspapers 173
Middlesex County 177

PAGE

Other Middlesex County Newspapers 183
Tolland County 185

CONNECTICUT INSURANCE

BY JOHN M. HOLCOMB 189

Mutuals 206
Adjusting to Requirements 209
The Chicago Fire Period 217
The Later Days 222
Reinsurance 225
National Board of Fire Underwriters 227
Modern Times 230
Life Insurance 237
Standardizing Policies 253
Other Insurance 258
Through the Years 263
Legislation and Progress 269

CONNECTICUT AGRICULTURE

BY EDWARD H. JENKINS 287

Preliminary 289

Aboriginal Agriculture 290
Maize, the Staple Crop; Other Food Crops; Textiles and Tobacco; Cleared Lands; Women the Farmers.

Agriculture in the Seventeenth Century 296
The Country; The Indian Inhabitants; Enter the English Colonists; Character of the Colonists; Division of Lands; Civil Government; Houses; Crops and Methods of Farming; Textiles; Live Stock; Hindrances to Agriculture; General Condition and Progress of the Colony; Help for Harvard College; "Rum and Tobacco."

Agriculture in the Eighteenth Century 322
Growth of Population and Settlements; The Household Unit; Agricultural Tools and Transportation Facilities; Crops; Tar Pitch and Turpentine; Live Stock; Enemies of the Farmers; Financial Matters; Progress in Agriculture; Agricultural Leaders.

Agriculture in the Nineteenth Century 345
Condition in 1800; Agricultural Societies; State Board of Agriculture; Dairymen's Association; Pomological Society; Cream Hill Agricultural School; Agricultural and Mechanical College; Connecticut Agricultural Experiment Station; Storrs Agricultural Experiment Station; Agricultural Tools; Commercial Fertilizers; Live Stock; Dairying and Dairy Stock; Sheep Industry; Fruit Growing; Seed Growing; Vegetable Growing; Tobacco; Corn; Rye and Oats; Wheat; Hemp and Flax; Conclusion.

Authorities Cited 422

STATE FINANCE AND TAXATION

PAGE

BY JOHN M. WADHAMS 427

Speech of Oliver Wolcott 432
Taxation in 1821 437
State Tax 441
The School Fund 447
Town Deposit Fund 454
Board of Equalization 461
Board of Control 461
Board of Finance 462
Tax on Savings Banks 465
Transportation Taxes 467
Investment Tax 469
Inheritance Tax 470
Capital Stocks of Banks and Insurance Companies 471
Tax Upon Miscellaneous Corporations 471
Automobiles and Good Roads 472
Bonded Indebtedness 474

THE LITERATURE OF CONNECTICUT

BY STANLEY T. WILLIAMS 481

A CELESTIAL ENCOUNTER

BY ERNEST W. BROWN 539

The Track of the Shadow 542
Organization 544
The Campaign 548
Coöperation 550
January 24, 1925 560
Astronomers at Work 563
Observing an Eclipse 569
Predicting an Eclipse 579
Scientific Results 581
The Corona 586
The Diamond Ring 590
The Prominences 591
The Flash Spectrum 592
The Einstein Effect 593
The Shadow Bands 595
The Radio Campaign 596

ILLUSTRATIONS

State Capital at Hartford ..... Frontispiece
Hartford Convention Cartoon ..... Facing Page 6
Hartford Convention Cartoon ..... " " 8
Oliver Wolcott ..... " " 12
Orville H. Platt ..... " " 18
Charter Oak Chair ..... " " 48
Alfred E. Burr ..... " " 68
F. B. Cooke ..... " " 68
Hartford Times Building ..... " " 68
Minott A. Osborn ..... " " 90
John B. Carrington ..... " " 90
Early Issue of the Courant ..... " " 90
Early Issue of the Connecticut Journal ..... " " 96
Hartford Fire Insurance Company Building ..... " " 196
Aetna Insurance Company Building ..... " " 204
Rossia Insurance Company Building ..... " " 226
Phoenix Mutual Life Insurance Company Building .... " " 250
Connecticut General Life Insurance Company Building. " " 256
Connecticut Agricultural College at Storrs ..... " " 380
Newgate Pennies ..... " " 432
Old Connecticut Paper Money ..... " " 440
Frank C. Sumner ..... " " 450
Harriet Beecher Stowe ..... " " 514
James Gates Percival ..... " " 524
Elihu Burritt ..... " " 530
Birthplace of Noah Webster ..... " " 536
Photographs of the Eclipse of January 24, 1925 ..... " " 550

POLITICAL PROGRESS

By Norris G. Osborn

Newspaper man—born in New Haven, Connecticut, April 17th, 1858. Son of Minott A. and Catherine Sophia (Gilbert) O.; A. B., Yale 1880, A. M. 1886; married Kate Gardner of New York December 27th, 1881; reporter, 1880–1884; editor since 1884, New Haven Register; controlling editor of New Haven Journal Courier since 1907; contributor over name of "Trumbull" to New York Herald for many years; editor of Men of Mark of Connecticut, and author of a few books of reminiscence; staff officer Connecticut National Guard, with rank of Colonel; active in many war societies and recruiting officer for the 102nd infantry A. E. F.; vice-president Connecticut Sound Money League, 1896; member several state commissions; delegate to Connecticut Constitutional Convention, 1892; delegate to several State and national conventions; Democrat. Episcopalian. President Board of Directors and Chairman Board of Parole Connecticut State prison, Wethersfield; home, 188 Linden Street; office, The Journal Courier, New Haven, Connecticut.

THE dominating characteristic of the State of Connecticut was under consideration not long ago by a group of citizens representing varied activities and personifying a pride in its achievement and bedrock temperament. The conversation was wholly devoid of partisan prejudice though partisan convictions were not absent. Agreement was had with regard to the statement of Bancroft, the historian, to this effect: "There is no state in the Union, and I know not any in the world, in whose early history if I were a citizen I could find more of which to be proud and less that I should wish to blot." There remained differences growing out of more recent history to be reconciled but, finally, it was agreed that an intelligent moderation had from the first controlled the conduct of Connecticut citizenship in all of its political undertakings. It has yielded less to radical philosophy than any other state while ready at all times to consider departures in legislative and administrative experiment provided a warrant could be found in human experience. In that respect Connecticut has been consistently conservative and on that account has more successfully met and overcome obstacles which have confronted all states from time to time than the great majority of them. Its hands have been remarkably clean of corruption and its devotion to the public interests interrupted at great intervals only. In this year of Our Lord its domestic affairs can successfully challenge those of any other state in the Union. It is free from debt, manages its institutions with less political interference, draws more abundantly upon its trained citizens for voluntary service, maintains an enviable judiciary by executive appointment, is surpassed by no state in the development of its highways, offers the

maximum of educational facilities, is generous in its aid of charitable institutions, susceptible to humanitarian obligations, keeps the balance steady between capital and labor, and in general feels and responds to the full force of responsibility.

This constitutes a record of achievement that may well be pointed to with increasing pride and faith in its political vision. Its form of government is in theory and fact more or less of a denial of popular political rights as they are generally recognized in other states. Not even in the House of Representatives is the principle of town representation enforced. Not only are towns differing vastly in population granted the same representation, but there are towns more equal in population which are denied equal representation. The Senate in theory is representative of population but in fact not. These are defects easily remedied by making the House a House of Towns and the Senate a Senate based squarely on population but the mood to remedy has not yet overtaken the people. The Governor is denied the veto power granted state executives in general, and the President of the United States. The General Assembly can defeat a veto by a mere majority vote. Yet in spite of these strange obstacles to popular government the results are admirable and, in the last analysis, results are what determine the character of the service rendered and the prevailing satisfaction with it. Theoretically, the form cannot be defended in logic; practically, it works to the common welfare. It is conceivable, therefore, that ultimately the public will demand a House of Towns and a Senate based on population as best preserving the virtues of both systems. At any rate, we see in conditions as they are the ruling passion of moderation.

The attitude of Connecticut toward the amendment of the organic law both at home and in the nation is thoroughly characteristic and commendable. It is an attitude of inherent opposition to changes which have not been clearly justified in troublesome conditions, on the one hand, and, on the other, to contemplated changes which threaten the principle of local self government which is the cornerstone of the Connecticut citadel of faith. The refusal of the State to ratify the first twelve amendments to the Federal Constitution originated in these congenital preconceptions. It may be reasonably questioned if the ratification of the amendment providing for the election of United States Senators by the people, and for equal suffrage is not to be attributed to the occasional lapse from confirmed convictions and predilections which is characteristic of human nature everywhere. The positive rejection of the amendment to the Federal Constitution providing for prohibition, for the imposition of the income tax "from whatever source derived," and that granting to the Federal Government the care of the children of the country, while in no way reflecting a hostility to temperance legislation, taxes on incomes, or an indifference to the welfare of the children of the State, was more in keeping with the fundamentals of Connecticut thought.

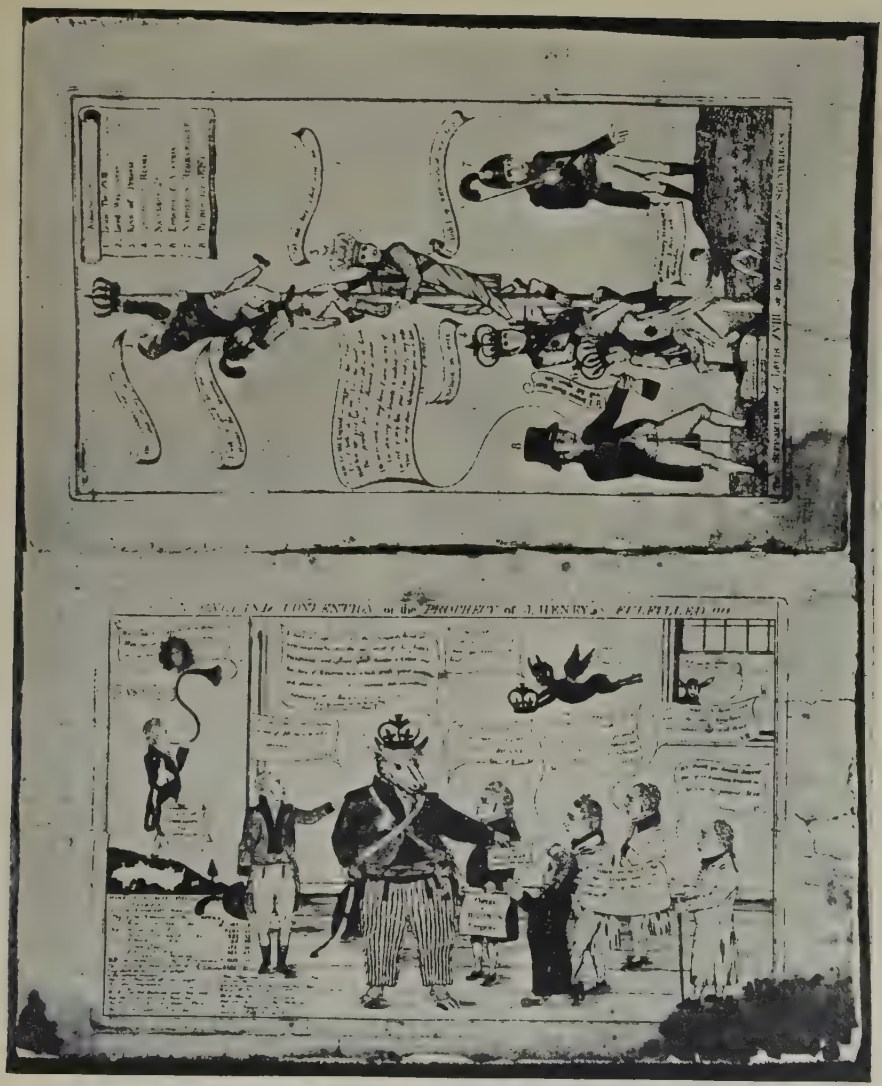
Connecticut has and is moved by the New England Conscience and by some mysterious process it becomes speedily injected into the systems of those who take up their residence here and assume the burdens of citizenship. In no state is tradition stronger. It springs from the soil of the fields and the hardened earth of the cities. As a result Connecticut has developed a manhood and womanhood notable for their sturdy qualities of mind and soul. The extent to which the country at large has drawn upon

Connecticut folk in the organization of its separate social and political divisions, while the consideration of that fact belongs elsewhere, warrants an allusion to it as an additional tribute to the political history of the State. From our political and social environment there has been drawn forth talent which under cultivation by home processes has spread itself to the very limit of human usefulness; from the church to the factory, in art, literature, science, philosophy and humanitarianism. The Connecticut race is one of wise and witty men. If they be Puritans in conscience and outlook upon life and that a taint upon their character, there need be no apology offered. Let the rest of the world make the most of it. Political Connecticut stands unashamed and unafraid. We can now pass to the consideration of some of the high spots of Connecticut's political history which reveal the traits of character to which reference has already been made and justify the general conclusions reached.

The Hartford Convention

There have been many Hartford conventions of great importance but none has gone thundering down the century like the Hartford Convention of 1814. Why should not Connecticut have had such a convention dealing with fundamental questions? It was potent in the National Constitutional Convention of 1787 in reconciling all differences between the large and small states; in the compromise of a Congress of two Houses, a Senate in which all states big and little had an equal representation and a House of Representatives in which states were represented by their population. This arrangement is called "The Connecticut Compromise."

During the War of 1812 New England was left to de-



Two Cartoons Contemporary with the Hartford Convention
Upper: "The supporters of Louis XVIII or the Legitimate Sovereigns"
Lower: "The New England Convention or the Prophecy of J. Henry Fulfilled."

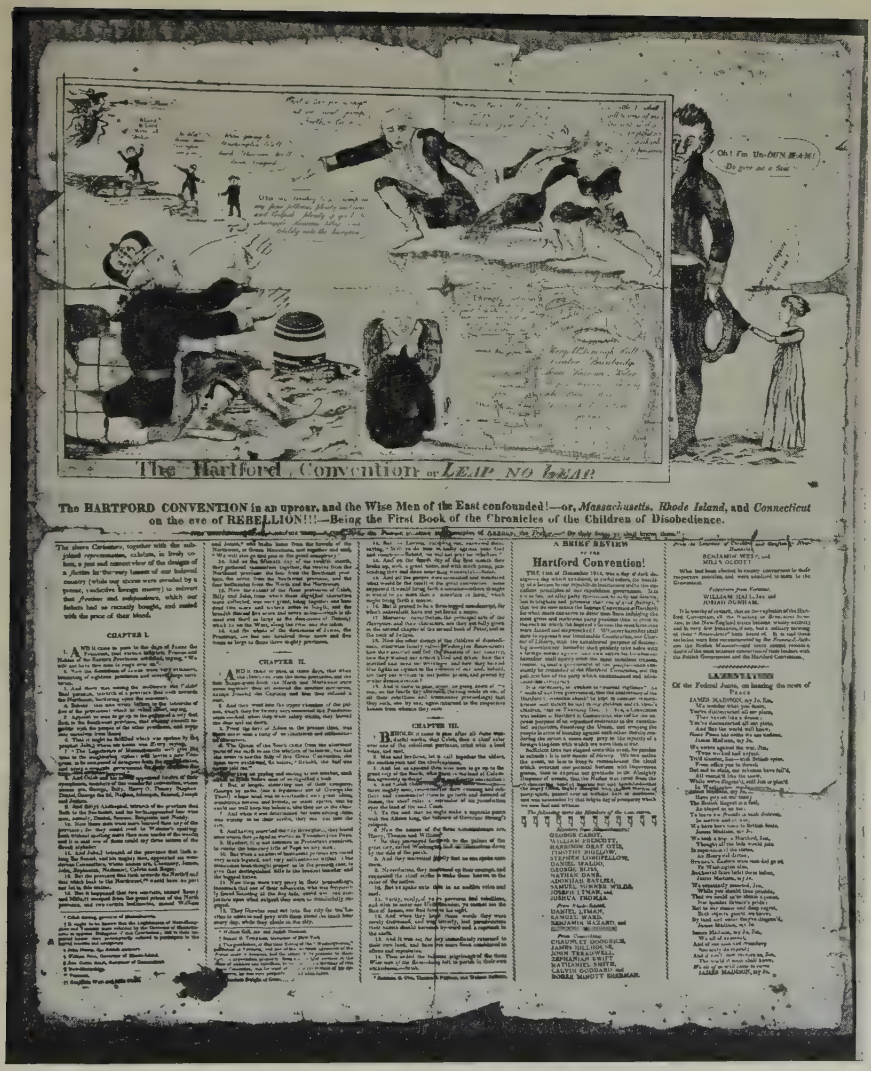
fend her coasts alone from the ravages of Great Britain. To this injury was added the imposition of the Embargo act by which her ships were tied up and her business made to suffer. When Maine had been invaded and Massachusetts was threatened it occurred to the latter State that it would be a good idea to have a conference of the New England States. At the request of the Governor of Massachusetts it was called to meet in the State House at Hartford, December 15, 1814. If the disaffected ones had held off a few months longer, a conference would have been unnecessary for the war ended favorably to our arms. Federalist leaders of Massachusetts secured the appointment of delegates; Rhode Island sent a number, New Hampshire and Vermont sent three between them unofficially and the General Assembly of Connecticut chose seven delegates by a vote of 153 to 36, the opponents being Jeffersonian Republicans. The sessions were in the old State House—ask the custodian of the now isolated historic place to show you the room—for three long weeks in the strictest seclusion. The resolutions adopted are in several instances—but not in all—in accord with the enlightened spirit of today. One proposed to take from states the right to be represented in Congress on the basis of three-fifths of slaves in addition to their free residents; another to require a two-thirds vote in Congress on the admission of new states, and on a declaration of war, and on commercial non-intercourse; still another to prohibit office-holding by citizens from abroad with an up-to-date provision to make the President ineligible for a second term, and a limitation of all future embargoes to sixty days. Two delegates were selected to present these resolutions to Congress, but the war ended too suddenly and the resolutions were not reported.

The people of New England disowned the convention at the close of the war, and the names of the Connecticut delegates were printed in black in the anti-Federalist newspapers immediately before any election of importance.

The convention was the death-knell of the Federalist Party, and led the way to the entrance of liberty into Connecticut from the Standing Order which had to recede in 1818 when the Republican or Toleration Party victory made possible a Constitution.

Constitution of 1818

It was in 1804 that Abraham Bishop of New Haven declared in a speech at Hartford: "Connecticut has no constitution. We still live under the old jumble of legislative, executive and judicial powers called a charter. We still suffer from the old restrictions on the right to vote; we are still ruled by the whims of seven men. Twelve make the Council, seven form a majority and in the hands of these seven are all powers, legislative, executive and judicial. On them more than half of the House of the Assembly is dependent for reappointment as justices, judges, or for promotion in the militia. By their breath are each year brought into official life six judges of the Superior Court, twenty-eight of the Probate, forty of the County Courts and 510 justices of the peace, and all the sheriffs. Who may be freemen? No one who does not have a freehold state worth seven dollars a year, or a personal estate on the tax list of $134. We demand a constitution that shall separate the legislative, executive and judicial power, extend the freeman's oath to men who labor on the highways, who serve in the militia, who pay small taxes, but possess no estates." These were the


The Hartford Convention or LEAP NO WAR
Oh! I'm Un-DUN-MAN!
Do give me a Seat
The HARTFORD CONVENTION in an uproar, and the Wise Men of the East confounded!—or, Massachusetts, Rhode Island, and Connecticut on the eve of REBELLION!!!—Being the First Book of the Chronicles of the Children of Disobedience.
CHAPTER I.
CHAPTER II.
CHAPTER III.
A BRIEF REVIEW
Hartford Convention!
Federal Ticket.
BENJAMIN WEST, and
WILLIAM OLCOTT
LAURELS FOR
Of the Federal Justice, on hearing the verdict of
PEACE
JAMES MADISON, my Jo Sue,
We wonder what you mean,
You've discovered all our plans,
Then we can't dream.
You've dismembered all our plans,
Our Navy, Army, Fleet,
Never Peace lay under so sore tedious,
James Madison, my Jo.
We never agreed the war, Jim,
Were we?—and had reason,
Tyth'd tooths, Jim—for British spite,
Then either you to thwart,
Refused to fight when you might have fight'd,
All enough like the same?
When were disgrac'd, and Ish at pleas'd
Indeed, indeed, my Jo Sue,
Have got us no mony
The British, lingered on a field,
An chapel on us too.
To have to thwart us such dudgeon,
Ye've been a fool, Jim,
We never have been to British fools,
James Madison, my Jo.
We took a trip - Hartford, Jim,
Thought all the bold would join
In opposition of the views,
Of Madison, my Jo.
Brought Lawyers from each God go up,
To Washington Jim,
Jacket'ed their bills! their talents,
James Madison, my Jo.
We unanimously resolved, Jim,
While you should lose pounds,
We would not lend you pence,
Nor basket letter's print!
Not to our means and doing cupid,
Which to grant we have,
By land nor water for the dispatch'd,
James Madison, my Jo.
James Madison, my Jo Jim,
Ye've been a fool,
And of our own Lad Treasury
You only do prove!
And I can't see to care for Jim,
The world it must shall know,
That we're your friends still,
JAMES MADISON, my Jo.

HARTFORD CONVENTION CARTOON OF 1814
(Being the First Book of the Chronicles of the Children of Disobedience)

issues in various conventions and at elections until 1817 when Oliver Wolcott of Litchfield was elected Governor. He thus became the Father of the Constitution and was chosen to preside over the deliberations of the convention. For the ten following years he remained in office. The Constitution was purposely prepared in the same building in which the Hartford Convention was held, and only four years later. To this convention the towns sent as many delegates as they had representatives in the General Assembly.

It is now generally acknowledged that the Constitution of 1818 was the great political event of the nineteenth century. Johnston says in his "Connecticut": "There were mechanics and good ones in Connecticut before 1818, but the State only began to be a distinctly mechanical commonwealth when the Constitution of 1818 had lifted all men into equality and the mechanic was for the first time on an equality with the Congregational minister." Purcell in his "Connecticut in Transition" says: "The greatest single result was the severance of Church and State and that The Bloodless Revolution of 1818 gave to the State a constitution as democratic as any then in existence." There was of course many a lugubrious utterance but that of Lyman Beecher, the famous, was tinged with a wonderful joy: "It was as dark a day as ever I saw. The injury done to the cause of Christ, as we then supposed, was irreparable. For several days I suffered what no tongue can tell, *for the best thing that ever happened to the State of Connecticut.* It cut the churches loose from dependence on state support. It threw them wholly on their own resources and on God."

To understand the magnitude of this victory the conditions which existed before the Constitution was adopted

must be realized. The original towns were churches as well and all of them of the Congregational order, although after the Consolidations assembling Presbyteries were ordered by the General Assembly based upon the Saybrook Platform they were frequently called Presbyterian. Taxation was on income, and the freemen of each town in town meeting laid the tax for both town and church purposes. Land was set aside for church purposes —known as glebe land— and was exempt from taxation as it is to this day. The pastor's salary was fixed, but, if it proved insufficient, he could call upon the town and state for an increase. His own holdings were exempt from taxation and he had a vote whatever his material condition. The missionary societies and other church organizations were in fact political organizations and at their state meetings formulated political issues and campaigns indicating their choice of candidates.

As the towns grew in population a second or even a third church was organized by order of the General Assembly, becoming a school corporation with the power of taxation for school purposes. At these schools the catechism was taught as one of the required studies and there were daily religious exercises. Gradually laws were passed permitting churches other than the Congregational to organize, and, when a citizen desired to separate from the Congregational and join another denomination, he had to so certify to the magistrate and get a demit. He was then exempt from the church tax levied by the town. The Constitution of 1818 permits each ecclesiastical society to tax its own members for church purposes in proportion to their taxable property as shown by the town tax list. Public schools were early provided and attendance made compulsory.

Concessions to the other churches, and the sharing with them of church funds granted by the State from bonuses for bank or other charters, were promoted for the purpose of postponing the inevitable day when the separation of Church and State should be accomplished. Another effort in this direction was made by the repeal of what was known as the "Stand Up Law" by which even the fortunate holder of a freehold estate of $7 a year had to stand up when voting in town meeting in order that the candidate or person interested could discover who it was that voted against him or his measure. This peculiar law was repealed in 1817.

The May session of the General Assembly of 1818 passed a resolution directing the towns to elect on July 4 their delegates to the convention. The convention met August 26. In two days the committee appointed for that purpose submitted the Preamble and Bill of Rights, and on October 5 the people adopted the Constitution by a vote of 13,918 to 12,364. At its October session the General Assembly declared the Constitution adopted. The vote in Hartford, Litchfield and Tolland Counties was cast against the Constitution. In this incident we catch an early flavor of the perennial independent spirit of the people of Connecticut.

Between 1790 and 1800 barely two per cent of the population voted — quite a difference between the figures for the Presidential election of 1920 and of 1924 when less than fifty per cent of the registered voters — or those who could have qualified — went to the polls. This was remedied in the Constitution of 1818. Even as far back as 1800 the Republicans called for the redistricting of the State in order that membership in Congress might be representative. It was desirable, also from a demo-

cratic standpoint that the method of choosing Presidential electors should be changed. They were then constituted of the Governor, Lieutenant Governor and the five judges of the Superior Court. By the radicals of that day this practice was described as hostile to free government and who will now question it? One great drawback to the advance of popular rule was the absence of Republican lawyers. The young men educated in the law received their education at the Litchfield Law School, or at Yale. It was the auricular method of teaching, and, at that time, both institutions were hot-beds of Federalism and repugnant to a government by the people. Judge Samuel Church, writing in 1850 of this period, states that appointments to offices were not suggested by caucuses as at present but by a mutual consultation between the clergy and the party—that is the Federalists. This objection to the rule of the majority was forcibly expressed in the statement by Lyman Beecher when he observed that "democracy as it rose included nearly all the minor sects, besides the Sabbath breaker, rum-selling, tippling folk, infidels and rough-scuffs generally."

The first resolute effort to secure a change was made in 1816 at New Haven when a Toleration or Reform ticket was named on February 21. The meeting was called a Republican or Episcopalian meeting. Oliver Wolcott was named for Governor and Jonathan Ingersoll for Lieutenant Governor. Elijah Boardman was a leading candidate for the gubernatorial nomination but he withdrew in favor of Wolcott. The battle cry was Ecclesiastical Reform. Wolcott was defeated, but Ingersoll was elected. The Toleration Party had eighty-five members in the House but not a majority. A strong fight was made against the Council, as the higher body was called, but it

Oliver Wolcott, 1760–1833.

Present at the burning of Danbury. First Auditor of the U. S. Treasury. Succeeded Alexander Hamilton as Secretary of the Treasury. Governor of Connecticut, 1817–1827. From the painting by Ralph Earl.

was not effective. The Federalists tried to placate the various religious bodies by donating to them, in addition to the amount given Yale College, a certain percentage of the $14,500 due from the National Government for disbursements during the War of the Revolution, but it availed little except with the Episcopalians who took their allotment; most of the other denominations rejected theirs or greatly delayed its acceptance. The year following the Toleration Party was again successful but in a much greater degree. It elected both its nominees for Governor and Lieutenant Governor, and Governor Wolcott remained in office for ten years during which period many important changes were made in the laws following the adoption of the new Constitution. After seventeen years of tough fighting, during which the ward workers were put to their best in rounding up the voters and those who ought to be made, the former rulers of Connecticut were defeated. Judge Trumbull, the leading Federalist and secretary of the famous Hartford Convention, wrote among other savage things, that a combination had been formed "among the restless, ambitious and dissolute part of the community to seize upon all the public offices in the state and apportion them among themselves. If this combination was in some measure tacit, it was nevertheless real and practical. To promote its views a standard was raised called Toleration, and offices were unblushingly offered to all who would resort to it. But lawyers without talents, integrity or business, quack doctors, broken merchants, idle farmers and idle mechanics, tavern hunters and gamblers can afford to spend days, weeks, months and years in low intrigues, inculcating falsehoods, in preaching politics in barrooms and at the corners of streets and highways, for the sake of an office with small

income; and that for this plain reason, that the time which they devote to the public use is worth nothing to themselves."

One important fact among many others in this conflict between the forces of liberty and those of intolerance was the withdrawal in 1808 of the power of the selectmen to make voters. By an old law the Superior Court possessed the power of disfranchising any freeman, and in order to make this more effective the number of judges was increased from five to nine. When the Tolerationists came into power, the old number was restored and the freemen were unmolested. And the Federalists, after the convention had prepared a constitution, held caucus at Hartford and from it issued the messengers, handbills and circulars which were scattered to all parts of the State previous to the day on which the Constitution was ratified.

Among many of the changes wrought by the new Constitution was the exemption of all persons over sixty years of age, and all under twenty-one, from the poll tax. The old law also required the farmer or mechanic to pay for the polls of his children or apprentices. The children of the rich, or of the nobility as they were called by the reformers, had not been obliged to pay a poll tax because they were sent to Yale and were thereby exempt. By the new law the children of the poor were placed on a level with those of the rich. There was also provision for the publication of the receipts and expenditures of the State. It was provided that this announcement should be made, accompanied by a statement of the permanent funds of the State, within thirty days after the rising of the General Assembly.

Among the actions recommended by Governor Wol-

cott when he took office was an inquiry into the condition of the copper mine prison at East Granby which was finally abandoned in 1827.

Conventions

In the early years there were no party conventions as they are now known. A few of the leading men with similar views would meet together, and through newspapers or pamphlets originated for the purpose would broadcast their views, issues and candidates. The office holders in the towns would hold conferences at the taverns and prepare tickets which, at first, were printed in the newspapers only. Later other ballots were provided. In this manner nominations were made for members of Congress and other high officials excepting candidates for Assistants (State Senators) who were named in town meeting by a ballot and stand-up vote. In like manner Representatives were nominated. No party platforms were presented and the partisans had to rely for their convictions upon what their leaders told them or what they read in their weekly paper. Conventions came into existence in the early thirties, but not in all states. The exigencies of travel were such in the country at large before the advent of sufficient transportation that the members of Congress at Washington had to determine the candidates for high office and agree upon the issues to be presented. It is stated that the Anti-Masons were the first party to hold a convention; this was in 1832. A Whig convention was held in Ohio in 1839. This meeting marked the passing of the old haphazard method of trusting to the press to plan a campaign, harmonize measures, and prevent a multiplication of candidates. A singular feature of this improvement was the refusal in

1842 of a Governor of Ohio to be a candidate again if he were to be nominated in convention. He stated that a convention was unnecessary and dangerous to the liberties of the people; a free expression of the party could not be obtained and such a method of nomination would bring into existence the professional politician whose continued power would depend upon office and its patronage. Up to the time to which he referred nominations had been made by the press and by popular meetings of the people. It is noted that a convention of the Jackson men in Connecticut was held in Middletown in 1836, or thereabouts, to support Van Buren, but this did not bear upon nominations. In 1828 when the Democratic-Republican Party became the Democratic Party, organized by Jackson, the nomination of Presidential candidates by caucuses of parties in Congress was decried. Indeed, the first Democratic National Convention was not held until 1832. It was then that the famous two-thirds rule was put into operation. In 1840 both major parties held delegated conventions and this has been the regular practice of all parties since. The first platform ever adopted at a party convention was that of the Young Men's Republican Party held at Washington, D. C., May 7, 1832. This party afterwards merged with the Whigs.

Electors were chosen years before—that is Presidential electors—by the Legislatures in Connecticut, Delaware, Georgia, New York, South Carolina, Tennessee and Vermont.

The first regular caucus of members of Congress for the nomination of Presidential candidates was held at Washington, D. C., February 25, 1804, by the Democratic-Republicans, who unanimously nominated Jefferson of Virginia and Clinton of New York. The Federal-

ists by agreement and without holding a congressional caucus supported Pinckney of South Carolina and King of New York.

The initiative in local and state party governments, which rested at the opening of the Revolutionary War with city meetings, societies and their committees of correspondence, was transferred to state and federal legislatures by whom it continued to be exercised until 1830 in all parts of the country, and in some parts until 1860. In 1789 George Clinton's enemies in New York State nominated Robert Yates in "General Meeting." This meeting was composed, as alleged, of "gentlemen from various parts of the state," followed by meetings in each county. This early germ of "representative conventions withered because of the difficulties of travel."

Lalor's "Cyclopedia" states: "It is highly significant that each step in the higher organization of our parties has been at a time when internal transportation was developed. The state convention reached its development in New York State in the decade which saw the Erie canal opened; the national convention first became complete in the period of railroad expansion from 1850 to 1860, and the management of a national campaign from a single party center only became possible from 1870 to 1880 when the telegraph system of the United States was first extended over our country. . . . The sphere which has been occupied during the half century closing in 1880-90 by the party platforms and the letters of candidates was earlier filled by addresses from state legislatures on federal and state topics, taking a range and appearing with a frequency since unknown . . . stormy meetings approved nominations made by state legislatures and appointed the customary committees of correspondence."

The last nomination made by a Congressional caucus was in 1824. One of the first state conventions on the modern plan was held in Carlisle, Pennsylvania, in 1821 to name a Governor. At the Hartford convention in 1812 the delegates from New Hampshire were elected at county meetings. The Whig convention at Baltimore in 1831 was called by a caucus of the Maryland Legislature proposing for each state delegates according to representation in the Electoral College and suggesting election of delegates to Congressional conventions. In Connecticut harmonious action was taken by a legislative caucus and a state convention, the districts, in addition, choosing their own delegates. It was forty years, 1831-1872, from the first national convention until one was held in which all the states were represented.

By the act of 1905 in Connecticut voters must be enrolled in order to participate in primaries and caucuses. This prevents the packing of such meetings with persons not connected with the party but used for ulterior purposes. The caucus chairman must submit questions of voting by ballot if a written motion requesting it is approved by a rising vote representing 25 per cent of those present. Names must be checked on the enrollment list. Violations of the act are punished by fine or imprisonment, or both. The provisions of the act do not apply to any organization casting less than 10 per cent of the total vote of any town or city at the last previous election.

To illustrate the influence of Connecticut in affairs of the general government Hollister states, that in 1857 the County of Litchfield alone had been the birthplace of thirteen United States Senators, twenty-two Representatives in the House from New York, fifteen Supreme Court judges in other states, nine presidents of colleges

Orville Hitchcock Platt, 1827–1905

U. S. Senator, 1879–1905. Bronze Plaque erected by the State in 1915 in the North Portico of the State Capitol, Hartford. Herman A. MacNeil, Sculptor.

and eighteen other professors and eleven Governors and Lieutenant Governors of states. The remark is attributed to Calhoun of South Carolina, himself an alumnus of Yale, that he had seen the time when the members of Congress born and educated in Connecticut lacked but five of being a majority.

Political Parties in Connecticut

The political parties in Connecticut follow the history of political parties in the country at large. There has been no party other than the Toleration Party, which achieved the Constitutional victory of 1818, that differs in major principle from the national parties of the time. The Democratic Party, as now known, was founded in 1828. In 1832 came the beginnings of the Abolition Party in the form of the New England Anti-Slavery Society, which led in 1833 to the establishment of the American Anti-Slavery Society. The Abolition Party was merged with the Free Soilers in 1848 and with the Republicans in 1856. The Whig Party came into existence in 1834 and was directed against the policies of "King" Andrew Jackson. It was a new name coined in the 1834 elections of Connecticut and New York city, and was quickly and spontaneously adopted throughout the Union. Old families of New England, never partial to Jeffersonian traditions, welcomed the title of Whig. No platform of principles was issued but twice—in 1844 and 1852—the rule was departed from. The party died in 1854 after the repeal of the Missouri Compromise in 1850, by the passage of the Kansas-Nebraska Bill, and the insistence of Congress upon the enforcement of the Fugitive Slave Law. The Abolition Party was organized in New York State under the party name. The Liberty Party was founded in

1840 by the Anti-Garrison abolitionists and merged with the Republican Party in 1856. It was in 1840 in Connecticut that the Liberty Party polled 174 votes out of a total poll of 6,977 throughout the Union. This grand total, looking towards the emancipation of millions, was so small that it called forth from the strong-hearted few the words of the Lord to Elijah the Tishbite and Prophet: "Yet have I left seven thousand in Israel, all the knees which have not bowed to Baal, and every mouth which has not kissed him." In 1848 the Liberty Party merged with the Free Soilers. The American Party was founded in 1855 about the time of the organization of the Know-Nothing Party which was opposed to the naturalization of so many foreigners and their induction into lucrative offices. These faded away when the Republican Party came into being with its advocacy of liberty to all mankind. There was a Republican Party in Michigan in 1854. but the present national party of that name originated in 1856 when the great Pathfinder Fremont was named for President—"Fremont and Freemen." The Connecticut branch of the party was organized by Joseph R. Hawley —afterward General and United States Senator—in the office of the Hartford "Courant" of which he was then the editor. In 1864, during the stress of the war and the desire to draw together all patriots, it called itself the "National Union Party," and in 1868, when the reconstruction of a devastated South was undertaken, the "National Union Republican Party." The Labor Party arose in 1866, the National Prohibition Party in 1869 which remained so constantly in the field in Connecticut that it distressed the Legislature with the difficulties of the majority election law and, finally, compelled a Constitutional amendment providing for plurality elections.

The Liberal Republicans with Carl Schurz as the great leader came into being in 1870 and the Labor Reformers in 1872. The Greenback Party with its activities in 1874 broke up the Democratic Party in Connecticut for a time, and gave New Haven an additional newspaper and a leader who afterward was prominent as a Democrat—Alexander Troup. The party disappeared in 1884. The Labor Party became the Social-Democratic Party in 1900, and then the Socialist. The Grangers, too, came on the stage in 1870 but did little or no damage in this State. In 1912 the Progressive Party wrought great changes in the country and had an effect upon the governorship of Connecticut paving the way for many legislative attempts at reform. The rise of the LaFollette Party in 1924 had also its suggestive effect upon the vote of the State as between the old parties. Other parties must arise as the country progresses and they may all be traced back to the Bloodless Revolution of 1818 in Connecticut.

Anti-Slavery

The political agitation against the sin of enslaving human beings because of their color began early in Connecticut. A law against the slave trade was enacted as far back as 1769. In 1784 an act was passed that all persons born of slave parents should be freed at the age of 25. Slavery had almost died out before 1806 but the fact that men, women and children of African birth or descent were legally slaves in the United States, and that they could be legally transferred or carried from one state to another, interfered with labor in the free states. This led to the formation of anti-slavery societies and of underground railways by which fugitive slaves fleeing to Canada for freedom could be helped on their way.

There were a number of these underground stations in this State. But while this good work was going on the prejudice against the negro was such that laws were passed against the establishment of schools or colleges for his education. These laws were enacted to prevent a college in New Haven, and also to abolish the school started by Prudence Crandall in Canterbury and destroyed by a mob, the proprietress being imprisoned for a night after having been severely maltreated. This was in 1833.

The doctrines of anti-slavery were promulgated by many eloquent sons and daughters of Connecticut and one magnificent violator of the laws she offered in the person of John Brown, the hero of Ossawatomie, Kansas, and martyr of Harper's Ferry. He was born in Torrington where the house in which that important event occurred has for a long period been set aside as a visiting spot of interest and patriotism. Connecticut nobly supported Kansas in her struggle against the border ruffians from Missouri who attempted to smuggle voters into the State to place it in the slave state column by a popular vote. Not only colonists were furnished but also rifles and ammunition.

As remote as 1819, when the slave power was seeking to gain both Florida and Missouri, there was an intense anti-slavery agitation in many parts of Connecticut. New Haven passed resolutions declaring it was the solemn duty of the government to prevent its extension. This contest continued until the War of Secession began, and then in a more vigorous physical manner up to the issuance of the Emancipation Proclamation, and then still some more. Even now, the manner in which the fifteenth amendment is enforced with little effect at the

South with the result that that section of the country has a much larger representation in Congress than is legal meets with much quiet criticism in the State.

In 1820 a law called the Missouri Compromise passed Congress. By this act Missouri was admitted as a slave state but prohibited slavery in any state admitted thereafter and lying north of the northern boundary of Missouri. This act was repealed in 1854 by the Kansas-Nebraska law, the question of slavery being left to a vote of the people. This great advance in the treatment of the slave was greeted by the great Thomas H. Benton of the United States Senate as the settlement of the bitter contest that had been carried on for over half a century; within six years one of the greatest wars in the world began between the states. It was intended by the supporters of the measure that Kansas should be voted a slave state and Nebraska a free state—but that was another mistake of great men and Connecticut aided in their downfall under the guidance of a Divine Providence.

Connecticut was responsible for the great speech of Daniel Webster when he demolished Senator Haynes of South Carolina who spoke fiercely for a separation of states if an agreement could not be had on this most momentous of questions. The speech of Haynes was such a fine one that when Webster appeared late in the Senate, having been detained in the Supreme Court in the argument of a case and declined to begin his answer, the great men said he was overcome and could not reply. But the next day the reply came! What Haynes said is only remembered because of Webster's great speech on the "Union, One and Indivisible." What started this debate in 1829 was a resolution "inquiring into the ex-

pediency of suspending the sales of public lands" introduced by Senator Foote of Connecticut.

It was in 1831 that an attempt was made to found a college in New Haven for free negroes with a mechanical department. This attempt failed because city officers and voters in public meeting denounced it and directed that every means be taken to defeat it. In 1833 a young Quaker girl, Prudence Crandall of Windham, established a school in Canterbury for colored girls. A town meeting declared the school a nuisance and the Legislature passed an act forbidding the introduction of negroes from another state for purposes of instruction without the written consent of the selectmen. The act of the Legislature provided that every person who should open or teach in a school, academy or literary institution for the instruction or education of colored persons who are not inhabitants of Connecticut would be fined $100 for the first offense, $200 for the second, and so on doubly for each succeeding offense, unless the consent of the selectmen be obtained in advance. This was called the "Connecticut Black Act." Miss Crandall having continued her school was arrested and jailed, released on bail the next day, and finally arraigned before a jury which disagreed. A new trial was ordered, and this time the jury found her guilty. The case was taken to the Supreme Court of the State which set aside the verdict on technical grounds. But a mob had accomplished the destruction of the school building and the institution was abandoned.

Another noted case in which Connecticut aided the anti-slavery cause was that of the *L'Amistad* captives. Fifty-two negroes captured in Africa by slave traders were being taken under Portuguese colors to Cuba in the

ship *L'Amistad*. This was in 1839. The negroes rose against their captors and killed all but two of the crew; these two they were compelled to bring to port. Instead of taking them home the white men brought them into New London Harbor where they were put into jail on a charge of murder preferred by their owners. They were brought to New Haven to be tried in the United States District Court. While here they were permitted to gambol on the Green day after day for exercise. In September they were taken to Hartford to be tried at a term of the court then in session there. They went up in a canal boat as far as Farmington and then to Hartford by wagons. The Hartford court decided that they had broken no law of the United States as the murders were committed on the high seas on a ship of another nation. And as that nation had no slavery laws they could not be held as slaves. Their defense was conducted by some of the leading lawyers of the State. The owners took the case to the United States Supreme Court which supported the Connecticut decision. The friends of the negroes raised money to return them to Africa where they went with two missionaries—as many of them as wanted to return; some went on exhibition through the country and others went to work in Farmington.

In 1845 the General Assembly of Connecticut censured Senator Niles for voting for the admission of Texas as a slave state. Had he voted "nay" he would have tied the ballot. In 1847 the people of the State refused to ratify a proposed amendment to the Constitution of the State erasing the word "white."

When the Civil War broke out it was Governor Buckingham of Connecticut who provided from his own resources the funds required to send the first troops to the

front. It was the Republican Party of Connecticut that brought into vogue the name "Wide-Awakes." In 1860 during the Lincoln campaign in Hartford there was a torch light procession which was the first to wear capes and caps of glazed cloth to protect themselves from the torch drippings. The company first adopting this method of protection was given the right of the line and called "Wide-Awakes." This was the idea of Col. Bissell, afterwards of the Twenty-Fifth Connecticut Volunteers. The term spread throughout the State and country. The readiness of Connecticut in the War of the Rebellion will never be forgotten. It provides one of the liveliest of its high political spots in the Legislature, in the camps and at the front.

As a result of all this the word "white" was in 1876 erased from the State Constitution. Previously, however, in 1869 the State had ratified the fifteenth amendment to the National Constitution giving all properly qualified persons, whatever their race, color, or previous condition of servitude, the right to vote.

English-Jewell Controversy in 1871

One of the high spots in state politics was in 1871 when the oft repeated contests for Governor between Hon. James E. English of New Haven and Hon. Marshall Jewell of Hartford came to a legal battle in the House and the Senate. Governor English served for two years, from 1867 to 1869; then Governor Jewell came in for one year —the terms were then for one year only—but he was succeeded by Governor English until May, 1871. These two leaders were contestants in the Fall of 1870. On the face of the returns Governor English had a majority of twenty-five but there were charges concerning illegal

voting in the Fourth Ward of New Haven, and in Cheshire and in Enfield, which if sustained would show a majority for Governor Jewell. When the Legislature assembled in May, 1871, Governor English, holding over, ordered out the militia for the election parade but finally countermanded it in order not to add to the difficulties of the situation. The Board of Canvassers made its report as usual to the Legislature showing that Governor English had the majority of votes as returned. The Legislature being Republican at once appointed a committee to examine the report; then both houses adjourned for a week, all state officers holding over. The committee was instructed to take evidence in Enfield and Cheshire and New Haven. The result was that on Wednesday, May 10, 1871, Governor Jewell was declared elected by a majority of 86. It was found that after the ballots in the Fourth Ward of New Haven had been stored in the town clerk's office after the counting, 100 Republican ballots had been stolen from the box. Nobody ever stated officially who took them. But this was not the whole of the offending. The returns as at first compiled gave 100 more Democratic votes than were cast. The theft of the 100 was during the discussion of the returns by the Legislature and the public, and was intended to even up the total in case an investigation should be ordered. The voting facts were drawn out before a legislative committee which sat in New Haven and had before them nearly 500 Republican voters who testified concerning the casting of their ballots.

The facts as found were that 100 more votes were returned for the Democratic ticket in the Fourth Ward than were cast and that 100 votes were abstracted—all Republican—in the town clerk's office when the investigation

was pending. Five hundred and forty-four electors of the Fourth Ward personally appeared before the legislative committee as it sat in New Haven and severally testified under oath that they respectively voted the entire Republican ticket in said ward on that day, with the exception of one who voted for Julius Hotchkiss for Lieutenant Governor, and another who voted for John Kendrick for Congress. It was proved before the committee by competent testimony that six other electors of said ward voted the entire Republican ticket therein on said day.

In Cheshire the Democratic registrar directed his assistant to subtract twenty-three from the votes cast for the Republican state officers and the rest of the ticket on the alleged ground that twenty-three persons had been admitted as voters upon defective applications. One of the twenty-three it was found did not vote. There was no evidence showing how the twenty-two voted. The Republican registrar returned the vote as it was actually cast. There were therefore two declarations submitted to the state canvassers.

In Enfield by an unintentional error each Democratic candidate for state offices was declared to have received twenty more votes than were actually given. The mark on the Democratic package of votes as counted appeared to be 96 when in reality it was 76. Both registrars told the town clerk of the error the next morning but he felt obliged to return the vote as it appeared on the face of the papers.

The state canvassers reported the following figures to the Legislature: James E. English, 47,492; Marshall Jewell, 47,450; scattering 17, which gave Governor English a majority of 25.

It was also asserted that the town of Somers was

credited with having given Governor English two more votes than he actually received. At any rate when the investigating committee finished its work the figures were as follows: Jewell, 47,473; English, 47,373; scattering, 14; total, 94,860. The Legislature declared Jewell elected by a majority of 86, and the defeated candidate gracefully withdrew.

The Period of "Peaceful Anarchy"

It was in this language that former Governor Charles R. Ingersoll of New Haven, who was an associate counsel for the Democratic Party in the *quo warranto* proceedings before the Supreme Court of the State, which sought to seat Luzon B. Morris of New Haven as the Governor of the State, identified the period during which Connecticut had no regularly elected chief executive, and Morgan G. Bulkeley of Hartford, whose term as Governor had expired, held to the office under *dejure* and *defacto* rights. The period to which Mr. Ingersoll referred continued two years, from 1891 and until in 1892 when Mr. Morris was elected Governor over Mr. Merwin by a majority over all as required by the Constitution. It was this prolonged and nervous experience which brought home to the people of Connecticut the realization of the social and political dangers which were threatened by the majority provision of the organic law. An amendment was promoted in the Legislature providing for plurality elections and subsequently approved by the people in 1901. There have been many interesting chapters in the political history of the State but none more fraught with danger than this, none more useful in awakening the people to the need for the change in the Constitution that followed.

The facts in brief are these: Morgan G. Bulkeley had been elected Governor in 1888 and took office in January 1889. At the election in 1890 the Democratic candidate for Governor was Judge Luzon B. Morris of New Haven. His opponent was General Samuel E. Merwin of that city. Both men were representative of the finest type of citizenship but wholly unlike in temperament and training. The campaign was hotly contested on both sides by the partisans of each. Neither of the candidates possessed forensic powers. Their dignified personalities rather than their powers of speech counted in their behalf. The official returns showed a vote of 67,662 for Morris, 63,975 for Merwin, 1 for S. E. Merwin, and for other persons, principally Prohibitionists, 3,661. On the face of the returns, therefore, Mr. Morris stood elected by 26 majority. A Democratic Senate and a Republican House had been elected, a fact which thickened the political plot of the extraordinary drama in the making. There is little reason to doubt that had the Legislature been differently organized, wholly Democratic or wholly Republican, there would have been no subsequent period of "peaceful anarchy."

Clerical errors had been alleged in Milford and other places, but the storm centered about ballots cast in Fairfield County which were alleged to bear distinguishing marks in violation of the law. The Democratic Senate acting on the face of the returns refused to join with the Republican House in an investigation of the charges, and on January 7, 1891 declared Mr. Morris and his associates to have been duly and legally elected to their offices. Upon the same day the House of Representatives appointed a committee to investigate the charges of irregularities, and with cunning foresight adopted a rule which

provided that no adjournment should take place, only a recess. This action was taken to avoid a discussion of the power of the General Assembly to examine and declare the result after the second day of the session. The Senate adhering to its view of the law proceeded to swear Mr. Morris into office, he being present to take the oath in the Senate chamber. He proceeded to take possession of the executive chamber. Nicholas Staub of New Milford, whose title to the office of comptroller was not in dispute, locked the doors of the chamber when Mr. Morris retired for the day and put the keys in his pocket. Governor Bulkeley, who claimed to be that official under the law, promptly reopened them by the use of a crowbar, and took possession of the chamber and held it for the two years following. Mr. Morris made no further efforts to obtain possession and that phase of the controversy ended. He declined to accept the theory advanced by some of his partisan supporters, that the office of Governor was wherever he might be, and that it was not necessary to occupy the chamber in order to exercise the powers of the office. Nor did he give heed to the whispered suggestion that he order out the troops, etc.

Eventually the case reached the Supreme Court where the right of the old officers, with the exception of the Comptroller whose election was conceded, was sustained, Chief Justice Andrews delivering the opinion which was concurred in by Judges Seymour, Torrance and Fenn and dissented from by Judge Carpenter. Further details of the case may be found in the Connecticut Reports 61. Tilton E. Doolittle of New Haven, who was state's attorney for that county at the time, brought the action in the Superior Court and was assisted in the *quo warranto* proceedings by former Governor Charles R. Ingersoll,

Henry Stoddard, and Louis H. Bristol. Upon appeal the Supreme Court held that there had been no legal election, and that, in consequence, Governor Morgan G. Bulkeley remained the *de jure* as well as the *de facto* Governor of the State; that the General Assembly had not lost the power to act after the second day of the session as required by the Constitution since it had not adjourned, and, therefor, had not lost the power to act; the Superior Court could not make a declaration of the election of a Governor for the Constitution provides that it shall be made by the General Assembly; therefor, the *de facto* officers hold over "until their successors are duly qualified" according to the provisions of the Constitution.

In announcing the opinion of the court, Chief Justice Andrews took occasion to say: "It is a high tribute to the sobriety and respect for law which pervades the people of this State that for almost a century no disputed election has happened which imperatively called upon the General Assembly to enact laws for the determination of the questions that arise in election contests. Such a disputed election has now come. It is, perhaps, not too much to hope that the General Assembly will make haste to put an end to the anomalous condition of our election laws." In 1901 the remedy was provided and an end brought to the scandalous practice of making Governors of men receiving less than the highest number of votes cast.

A feature of this period of "peaceful anarchy" was the splendid patriotism of Governor Bulkeley in providing from his own resources the funds needed to keep the institutions of the State functioning. It is not enough for a man finding himself in his position possessed of the resources necessary to meet such an emergency. There must be the courage and faith to supply them. There was

no assurance that the money advanced would be repaid, however promising the chances, and the moneys supplied ran up into troublesome figures for any man or corporation to risk. That his faith was not misplaced was shown at the next session of the Legislature when the money was returned with interest. While not a determining factor in his candidacy for the United States Senatorship this fine action of Mr. Bulkeley in the hour of the State's needs added to both his popularity and his political strength.

Temperance and Prohibition

For many years attention was called to the dangers of over-indulgence in intoxicating liquors and laws were passed punishing such over-indulgence. In 1821 Governor Wolcott in his annual message set forth his idea and recommendations: "I . . . respectfully request you to consider the expediency of imposing a justly proportioned excise on the retailers of distilled spirits, and of appropriating the proceeds in aid of voluntary donations to the encouragement of internal improvements. I am convinced that the effects would be salutary and I hope that the measure would not be displeasing to any of our constituents." In 1822 the Governor restated the advantages of a tax on liquors with which to begin internal improvements: "An excise on the consumption of distilled spirits might be collected at a very moderate expense by one officer in each county. Whatever duty was imposed would be refunded with profit to the retailers as it would wholly fall upon the consumers. It ought to be no part of our ambition to retail ardent spirits at low prices. The principal consumers are improvident men who frequently ruin themselves, distress their families, and greatly add to the expense of towns. It is morally right

that they should repair the evils they create and it is by taxation alone that this effect can be produced. To many individuals who are not ruined the expense is hurtful and in the degree in which the consumption of spirits is innocent the tax would be voluntary, light and insensibly paid. Probably distillation is the art most injurious to mankind which was ever invented. As, however, this art furnishes a market for grain and fruits which are productions of our soils; as it supplies articles of commerce to state and counties within our jurisdiction; as reformation ought to commence at home and with those who propose them; and as distillation is everywhere practiced, and as it would be worse than useless to extend restrictions which would be injurious to ourselves without being beneficial to others I submit to your consideration whether the distillers and importers in the State might not be exempt from any duty on being required not to sell ardent spirits in less quantities than a single barrel and in this State only to licensed retailers, and also to render accounts to the excise officers of the quantities sold and the persons to whom distributed. Such regulations would facilitate the collection of the revenue equal among the vendors. A well devised system on this subject would be everywhere supported by all conscientious men and would furnish a title to the lasting gratitude of the people."

Prohibition was established in the State in 1839 having been brought about by the activities of temperance societies, the first of which was organized in 1830. This law was however succeeded by the Act of 1847, which authorized the county commissioners to grant liquor licenses on the recommendation of the selectmen of the town. Later the towns were given the power to vote upon the applications for licenses on application of not less

than twenty-five legal voters. In 1854 the Maine Prohibitory Law was enacted in Connecticut but this was soon after succeeded by local option and license laws. In 1867 a general license law was favorably reported to the General Assembly but not acted upon; in 1872 a license law was enacted — "In place of a prohibitory Law which experience had proved inoperative," said "The Palladium" (New Haven), "We have now a license law of great strictness."

In 1882 the General Assembly approved a proposed Constitutional amendment prohibiting the manufacture and sale of intoxicating liquors. This was not approved by the succeeding General Assembly, but in 1887 the amendment was again proposed and approved and also as required by the Assembly of 1889. It was, however, defeated when submitted to the people for ratification, the vote being 22,379 in its favor to 49,974 in opposition.

The eighteenth amendment to the Constitution of the United States, ratified by a sufficient number of states by 1919, then came into force and, though Connecticut has never ratified it, it is law in this State as elsewhere.

The Prohibition Party in the United States of which a representation had always voted in this State included the following planks in one of its platforms always trying to accentuate the high political spots of the age: "We favor the initiative, referendum and recall. And we pledge that the manufacture, importation, exportation, transportation and sale of alcoholic beverages shall be prohibited. We favor a uniform marriage and divorce law. We favor the extermination of polygamy. We favor the election of United States Senators by the direct vote of the people. We favor suffrage for women on the same terms as for

men. We favor the complete suppression of traffic in girls."

Of these important issues four have been settled favorably to the determination of the party advancing them.

Woman Suffrage

That woman suffrage is an accomplished fact throughout the country is due in no small measure to the activities in Connecticut for the last sixty years. At the session of the General Assembly in 1867 a minority of the committee on Constitutional amendments reported favorably on a petition for the enfranchisement of woman. When the report was submitted to a vote there were 93 in favor to 3 opposed. The great leader of that day was Frances Ellen Burr of Hartford. She was a newspaper woman connected with the "Hartford Times" and a sister of Alfred E. Burr. All the older people remember that fearless oratress Anna Dickinson, who delivered many useful and interesting lectures before large audiences in Young Men's Institute and other courses of entertainment. In 1861 at the age of nineteen she made a telling address in those stormy days in behalf of the Republican Party. This was in Hartford. Hartford also boasted the rich personality of Isabella Beecher Hooker, sister of Harriet Beecher Stowe and of the Rev. Henry Ward Beecher. She had married John Hooker who was for years the reporter of the Connecticut Supreme Court of Errors and himself a fierce contestant for the suffrage and other rights of women. It was Mrs. Hooker who probably found some of her ideas strengthened by contact with Anna Dickinson whom she entertained on that memorable visit to Hartford and called the first woman suffrage convention ever held in Connecticut. This was in September 1869.

Marshall Jewell was then Governor of the State. He entertained the delegates and in his address to the General Assembly called attention to necessary improvement in systems of education for women; for the enactment of laws giving them equal rights to property and for better divorce laws. Mrs. Elizabeth Cady Stanton, writing in "The Revolution," urged Connecticut to do its whole duty to women. "If Connecticut with its blue laws, disloyal Hartford Convention, and Democracy has, nevertheless, been a Canada for fugitive wives from the yoke of matrimony, pray keep that little State like an oasis in the desert sacred to sad wives at least until the sixteenth amendment to the Federal Constitution shall give the women of the Republic the right to say whether they are ready to make marriage under all circumstances for better or worse an indissoluble tie."

In 1877 Governor Hubbard advised the Legislature to enact certain laws concerning property rights for woman. "Not only," were his words, "has the husband absolute disposal of all his own property, freed from all dower rights, but he is practically the owner through coverture, of all his wife's estate not specially limited to her separate use; and after her death has in every case a life use in all her personal and in most cases in all her real property by a title which the wife no matter what have been his ill deserts is powerless to impair or defeat; whereas on the other hand the wife has during the husband's life no more power of her own right to sell, convey, or manage her own estate than if she were a lunatic or slave, and in case of death has a life use in only one-third part of the real estate of which he dies possessed, and no indefeasible title whatever in any of his personal estate. As a consequence a husband may strip his wife by merely voluntary disposi-

tion of all claim to his estate after his death and thus add beggary to widowhood. . . . I am not unmindful that the husband alone is liable in the first instance for the support of the family; but this is much more than neutralized by the fact that in most cases the wife's whole life is spent in the toilsome and unpaid service of the household and that the whole drift of her estate in consequence of her more unselfish and generous nature is towards the husband's pockets in spite of all the guards of the law and every consideration of prudence."

A law was passed in 1877 in accordance with these recommendations.

It was in 1870 that Rev. Mrs. Phebe A. Hanaford, Universalist of New Haven, was chosen chaplain of both the Connecticut Senate and House. She was an able leader in the agitation for the advancement of woman.

Miss Mary Hall of Hartford was the first woman to be admitted to the bar. Owing to a dispute as to whether women had the legal right to practice law the Supreme Court of this State in 1882 held that she had this right. Chief Justice Park rendered the opinion. In 1879 a woman was appointed a commissioner of the Superior Court. Previously women had been appointed by the United States as postmasters and as pension agents. There were the Smith sisters of Glastonbury—Julia and Abby—who were the leaders in the petition submitted to the Legislature in 1878. At the previous session the House had voted to give woman the suffrage in all town affairs but the Senate had refused to concur—so the intrepid sisters petitioned again.

Women have been instrumental in securing the passage of many of our best laws. One of these is the law prohibiting the sale of tobacco to boys under 16; another

compelling merchants to provide with seats women and girls in their employ when not engaged in their duties; another requiring scientific temperance instruction in public schools and another requiring police matrons in cities of 25,000 or more inhabitants.

In 1884 a bill to give women the right to vote at school elections and meetings was rejected by the Legislature, and again in 1885 by both houses. A bill for full suffrage was defeated in both houses in 1886 and in 1887 a full suffrage bill was again defeated together with one exempting unmarried women from taxation. But in 1887 came the victory of the act making women eligible to serve as school trustees. In 1889 full suffrage was again rejected but women were made eligible for selection as assistant town clerks and members of ecclesiastical societies. School suffrage was granted in 1893, Governor Luzon B. Morris signing the act. Later attempts were made to repeal this wise provision but they failed miserably. The reformers kept right ahead, and in 1895 asked the privilege of voting for Presidential electors but this was courteously refused. Then municipal suffrage was extended to women by the House but the cold Senate declined to concur. In 1897 the bill to extend to women the right to vote for Presidential electors was again rejected. Then exemption from taxation was again urged but the bill was rejected; the same action was taken with reference to a repeated effort for municipal suffrage. The resolution creating a woman inspector of factories passed the House but failed in the Senate—which was supposed to be the popular branch. But in 1877 the property rights of women were made equal with those of men; in 1895 the age of protection for girls was increased to 16. It was also provided that two of the five members of the State

Board of Charities must be women. They were also permitted to serve as notaries public.

These reforms in the laws were accompanied by similar exhibitions of reform on the part of our higher educational institutions. In 1872 Wesleyan University at Middletown admitted women as students to the maximum of twenty per cent of the total enrollment. In 1889 the Hartford Theological Seminary admitted women. This is a Congregational institution—the successor in the field of the Standing Order before the Constitution of 1818—showing the growth of toleration since the early days of the State. In 1892 Yale admitted women, opening the post-graduate department—Ph. D.—to them. The State Agricultural School at Storrs admitted women in 1893. And the growth of the public schools is such that the number of women teachers is larger than that of men.

In 1919 Connecticut women made a wonderful campaign in the struggle to secure Presidential suffrage from the State. They failed by only one vote in the Legislature. They obtained 98,000 signatures of women to their petition, and under the leadership of Miss Katherine Ludington achieved a practical victory although legally defeated. Although the nineteenth amendment to the Constitution of the United States by which women now vote in all states was not supported by either of the Senators from Connecticut, the vote in the Connecticut Senate was unanimous for ratification and in the House nearly so—216 yeas to 2 nays. Thus the great victory so nobly contended for in Connecticut was finally won some sixty years after its famous beginning under Anna Dickinson and her loyal associates. Owing to a technical question the ratification by the Legislature had to be repeated and this was done September 21, 1920, seven days later.

One Capital Fight

The contest over the question of one capital or two capitals and, if one, where to be located convulsed the State for several years prior to 1870, and from that time until the victory of Hartford in 1873 when the proposed Constitutional amendment designating that city as the sole capital of the State was ratified by a majority of 5,192. The Legislature had long been dissatisfied with the condition of the old State House in New Haven, and with the one in Hartford also. Hartford being the great financial district of the State at once took steps to secure the prize. The city of Hartford, always enterprising, issued bonds to buy from Trinity College the magnificent site it occupied on Capitol Hill. The land was bought and an additional sum appropriated for a State House. After repeated controversies in the Legislature, the seat of government was removed to Hartford.

It was May 31, 1871 when the resolution of the previous General Assembly providing for a single capital and for a vote of the electors as to a choice between Hartford and New Haven was submitted in the Senate. There was no debate. A two-thirds vote was necessary. There was one less vote than the number necessary; instead of the required 14 there were only 13 with 8 nays. The proposed amendment to the Constitution was also lost in the House by a vote of 144 to 89—less than the necessary two-thirds. The vote in the House was taken June 14.

In his annual message that year Gov. Jewell made this reference to the capital question:

"An amendment to the Constitution will come before you, submitting to the people of the State the question of permanently locating the capital. The importance of the

subject demands and I doubt not will receive your careful consideration. There is a growing sentiment in the State in favor of biennial elections to be held in the autumn, to which I would call your attention. The time will probably soon come when by Congressional enactment all members of Congress must be elected on the same day. It requires no argument to demonstrate the great economy it would be to the State to hold two elections in four years, instead of five in four years as at present. I recommend that measures be taken to bring about this result."

At this session of the Legislature a resolution was introduced appropriating $500,000 for a State House in Hartford—it came to its third reading in the House June 20, 1871. There was also a resolution appointing a commission of five to construct the State House, Hartford to donate a site and appropriate not less than $500,000 toward the building. Another resolution authorized Hartford to issue bonds not to exceed $1,000,000, a city meeting to be held to pass upon this issue. It was provided that the State should donate the old State House to the city, which it finally did. The famous, old and beautiful building on Main Street, in which the Hartford Convention was held and in which the Legislature held forth for years and in which the Constitution of 1818 was adopted, for a score or two of years afterwards was the meeting place of the Court of Common Council and is now a visiting place for the historically curious.

But the friends of New Haven were not altogether quiet. On June 27 in the House Mr. Ingersoll of New Haven moved an amendment to the resolution appropriating money for a new State House at Hartford to the effect that $500,000 should be appropriated for a new State House at New Haven also. This amendment was ruled

out of order. Mr. Ingersoll then offered a resolution appropriating $600,000 for building State Houses in both Hartford and New Haven—$300,000 to each—and appointing a commission to oversee the work and determine how much the two cities must pay toward their construction. This resolution was referred and ordered printed. In supporting his resolution, Mr. Ingersoll asserted that "it is as notorious that the legislative accommodations are as poor in New Haven as in Hartford, and how is it that you will appropriate half a million to Hartford and nothing to New Haven, which must pay one-seventh of the whole?"

The Springfield Republican in commenting upon the situation said: "Hartford's generosity in offering to give half a million dollars towards a new State House is accompanied by a proposition that the present State House shall be turned over to the city, and as the lot is worth from $300,000 to $400,000 this will make the burden decidedly easier to bear."

A bill was passed at this session in the Senate providing for new State Houses in both Hartford and New Haven and sent to the House which rejected it. Mr. Stoddard of New Haven then introduced a resolution appropriating $500,000 for a new State House at New Haven but it was voted down, the Senate, however, continued to pass it —both houses acting by a majority vote which was parliamentarially correct. It was really a decision in favor of one capital which being a Constitutional question could only be determined by a two-thirds vote of both houses. This led the New Haven "Palladium" to state August 3, 1871: "The Assembly of this year leaves a record of having sided with an attempt virtually to decide a Constitutional amendment by a majority vote."

The Senate passed the resolution appropriating $500,000 for a new State House at Hartford June 29. The House, of course, concurred. New Haven persisted with its offers to build a State House not to exceed a million dollars in cost, but the offers were continually rejected. At the May session in 1872, a resolution was offered to permit New Haven to issue bonds to build the new State House and to call a city meeting to pass upon the question but it was referred and never passed. The offers were specifically and finally rejected June 19, 1872.

In the meantime, work had begun on the new State House authorized for Hartford. Governor Ingersoll at the May session 1873 recommended the calling of a Constitutional convention now that the trend was towards a single capital. Such a resolution was introduced by Mr. Harrison of New Haven. The Governor had this to say in his annual message upon the "New State House": "I am advised by the Chairman of the Board of State House Commissioners that a contract for the erection of a new State House at Hartford was completed by the board in September last with Mr. James G. Batterson of Hartford at a cost of $875,000, the building to be completed by the first day of May, 1875. The work under the contract has been commenced but has been delayed by the severity of the season. The legislation of the last General Assembly has, in some of its measures, been called into public question and the subjects merit your most considerate attention."

The Constitutional amendment making Hartford the sole capital was submitted to the people in October, 1873. Its ratification by a majority of 5,192 was as follows by counties:

Counties	*Yes*	*No*
New Haven	1,564	17,784
Hartford	16,458	470
New London	4,450	2,059
Fairfield	2,452	6,070
Litchfield	3,597	2,086
Middlesex	2,002	1,556
Windham	2,906	1,019
Tolland	3,101	294
Total	36,530	31,338

The New Haven "Palladium" of October 9, 1873, said:

"Under our two capital system the inequalities of representation—monstrous as they are—were to some extent counterbalanced. With the ratification by the people of the Hartford amendment thus making that city the sole capital of the State the need of reform becomes even more urgent. We therefore said that the calling of a Constitutional convention had now become 'the one great important issue in state politics.' We have no words to waste in repinings over the past, or any desire to revive discussion on dead issues. We shall be only too well pleased if our anticipations as regards the interests of Hartford to compel the Legislature to assume the $1,100,000 that the city voted for the State House shall prove to have been unwarranted, and that no further appropriations will be granted for the new capitol. But to make it sure that the legislation and politics of the State shall not be controlled by any capital ring there is but one way. The demand for a just representation is not only right in itself but comes with imperative force now that the State is to have but one capital. The southern portion of the State is not represented today and has not that influence in politics and legislation to which its great population, large wealth and rapid progress entitle it."

The Hartford "Courant" said: "Examination of the votes on the capital amendment shows that leaving out New Haven the vote is about four to one in favor of one capital; leaving out both the capital cities there is a large majority—considering the light vote—in favor of the amendment."

Governor Ingersoll in his inaugural message delivered at Hartford alluded to the change as follows: "In accordance with the act of the General Assembly the proposed amendment to the Constitution of the State providing for the holding of all sessions of the General Assembly at Hartford after the present official year was on the first Monday of October last submitted to the electors of the State and by them approved; and proclamation has been made declaring it to be a part of the Constitution. This important organic change, breaking through a usage strengthened by the observance of nearly two centuries, evidences most strongly the altered circumstances of our State since the adoption of the present Constitution, and gives renewed force it seems to me to the considerations I presented to the General Assembly at its last session, and which it cannot be necessary for me now to repeat, in favor of a convention for the revision of the entire instrument in order to adapt it to our changed conditions."

The walls of the new State House were substantially completed for the first story May 15, 1874 and the Governor alluded to the fact that as the State House at New Haven could no longer be used for the Legislature that provision must be made for its disposition. The Legislature gave it to the city. The city permitted certain city societies and boards to occupy it, but as the old Ionic structure needed extensive repairs the question of these improvements was presented to the electors of the city in

1887. Out of a total vote of 8,619 a majority of 1,250 voted for repairs. The common council thereupon passed the necessary resolutions except that no money was provided. The commission appointed to make the repairs did not act, and another was appointed in its place, four members of which believing apparently that they were voicing a part of the public opinion recommended the removal of the building. This removal was carried out after meeting with a storm of public disapproval, and an injunction from the Superior Court which was finally dissolved. When the first and last of the great walls were torn down there was much excitement in the city.

The Ionic State House was begun in 1827, succeeding the old brick Court House built in 1763 on the Green just back of where Trinity Episcopal Church now stands. The Legislature met there and state offices were in the building. Before that, the State House was on the Green near Elm and College Streets; this was in 1717-1763. The jail was near. This was removed about the time the brick Court House was reared. The Ionic structure begun in 1827 was due to be finished in 1830 but was not completed until 1831. It was of a Greek model made of Sing-Sing marble. It was used not only for state legislatures and offices but courts were held there—the higher ones until the City Hall was built in 1861, and the Court of Common Pleas from its birth in 1869 to the year 1872. The most important meetings held in the basement were the town meetings at which a handful of men went through certain routines once a year with a moderator and clerk in charge.

Other Constitutional High Points

When the Constitution of 1818 was adopted, the judges therefore—of the higher courts—who had been elected annually by the Legislature were to serve during good behavior or until 70 years of age. This was further changed in 1855 to appointment for eight years; in 1880 to appointment by the Governor and acted upon by the Legislature. In 1818, the suffrage was limited to tax payers or members of the militia. In 1845, it was extended to all white males of full age. The color test was not stricken out in the State Constitution until 1876. Since 1855 ability to read the State Constitution—any part thereof—in the English language has been required. In 1828 the State was divided into districts each one of which was to elect one Senator. But as population became so much larger in some districts than in others—like conditions in the various towns which have not been correspondingly liberalized although much debated ever since—it was provided that no county could be divided nor have less than one district; nor could any town be so divided as to be part of it in one district and part in another which includes all or part of a town. In 1884 the Constitution was amended making state elections biennial instead of annual, the first session under this provision being held in 1886. The sessions had been changed from May to January in 1876.

From 1639 to 1828 the upper house consisted mainly of men representing the political views prevailing 10 or 20 years before, because these magistrates—twelve in number—had to be chosen from a nomination list of 20—arranged with the magistrate in office at the head —so that voters usually voted for the first twelve. The

Chair made for the use of the Governor on formal occasions from oak taken from the Charter Oak. Kept in the Senate Chamber of the State Capitol, Hartford.

Senate between 1828 and 1905 has consisted of not less than 18 nor more than 24 and since 1905 of not less than 24 nor more than 36. The House of Representatives from 1639 to 1818 consisted of four deputies from each town but when a new town was incorporated it was to have but one deputy. In 1874 it was provided that every town of 5,000 or more population should send two representatives to the House; this enfranchised Bridgeport, Meriden and Derby which being new towns could only choose one representative. In 1876 it was provided that new towns thereafter should have but one representative and those under 2,500 population none. In 1921 when West Haven was detached from Orange in New Haven County it was made a voting district of the town from which it was detached although having a population of some 16,000 as against 1,260. This was remedied two years later.

In 1850 it was provided that judges of Probate and justices of the peace should be chosen by the electors and not by the Legislature. In 1876 the terms of the judges of the Courts of Common Pleas and of District Courts should serve for four years instead of one year; and judges of City and Police Courts two years; and judges of Probate two years. In 1877 it was provided that the salaries of public officers and agents could not be increased during their terms of office, and that no county or city could become financially interested in any railroad corporation in any manner whatever, large losses in such investments having been recorded.

County sheriffs were appointed for three years by the General Assembly under the Constitution of 1818 but this power was conferred upon the electors of the counties in 1838, power to remove, however, being retained by the Assembly. In 1886 the term was made four years.

In 1876 the compensation of members of the General Assembly was fixed at $300, with one mileage each way for each session at the rate of twenty-five cents a mile; in 1884 this mileage was extended to any special session, and in 1916 it was provided that the General Assembly might provide for the transportation by public conveyance by the most convenient route between his home station and the place of meeting during the session or sessions of the General Assembly to which he was elected.

Improvements in the Ballot

The improvements in the method of voting have been marked in the last thirty years. A strong effort was made about 1890 to secure the introduction of the Australian ballot and a bill to that effect was presented and passed but was opposed by the Governor. A substitute was provided by the powers that were; it was the envelope act. The voter took a ballot given him at the polls and an envelope, and retired to a booth to put the ballot in the envelope which when sealed was cast as the former open ballot had been. In a number of cases the envelopes were not sealed, and the vote was therefore lost. There was more secrecy in this method than in the old open ballot which was spread out sometimes on the box and deposited by the box tender. Party workers hung around the voting place and some even overlooked the boxes in order to determine how the voter voted. In the envelope bill this impertinence could not be exercised, but in some instances it was charged that the ballots and envelopes were obtained outside and prepared for the obedient voter who took the ballot and envelope given him by the tenders but cast the already prepared ballot and envelope, returning the unused to the caretaker outside.

Under an act of the General Assembly approved June 19, 1903 a board of voting machine commissioners was established. The Governor was to appoint the board which was charged with the duty of selecting a voting machine to be used at all elections. A Constitutional amendment had to be adopted to make this method of voting legal; this was done in October 1905, but it was specially provided that the right of secret voting should be preserved.

Towns have the privilege of determining whether they will use the machines for voting. In towns adopting voting machines the board of selectmen is required to provide for each polling place one or more machines in complete working order and, thereafter, to preserve and keep them in repair. They are further required to appoint a suitable mechanic or mechanics to place and adjust such machines and otherwise prepare them for elections. Such mechanics file a written report of the condition of each machine prior to the election certifying that the machine has been prepared by them and that it is in readiness for operation at the election. They are also required to place upon each machine a seal with sealing wax in such a way that before any movement of the registering or voting mechanism can be made such seal will be destroyed or broken. Other regulations for the care of the machines, notice to the chairman of the town committee and reports to be filed with the town clerk are made by the act to secure a more perfect protection against tampering with the machines.

The selectmen are required to provide for all polling places using voting machines at least two sample ballots arranged in the form of a diagram showing the front of the machine as it will appear after the ballots are arranged for voting on the day of the election. Cardboard, paper

or other material, on the front of each machine containing names of candidates, or a statement of proposed Constitutional amendment or other question or proposition to be voted on, is known as a ballot label. Each party furnishes its own ballot-label according to the form of labels and instructions furnished by the town clerk. Such labels must be approved and accepted by the town clerk not less than three days prior to the election. Four are furnished for each machine and six additional labels or paper by the two leading parties for the purpose of making up the sample ballot diagram.

In Colonial days Connecticut showed at one time only two per cent of actual voters among the population where perhaps sixteen per cent were qualified electors. The percentages are different today but the number of actual votes cast represents about one-half of the possible number on the lists. This brings to mind the suggestion of some method of impelling citizens to exercise their duty or be rebuked for neglect. Belgium has compulsory voting, so has Austria and Spain.

In 1845 the property qualification for voters was abolished and in 1855, during the Know-Nothing excitement, it was constitutionally provided that all who desire to be made electors must be able to read any Article of the Constitution or any section of the statutes, and further in order to Americanize our immigrants it was provided in 1897 that this reading must be in the English language. The provision of 1855 is said to have been the first of the kind among the states.

All this enfranchisement of the voter and the protection of the liberties of the people sprang from the anti-slavery campaigns. In the middle of the last century the stress which the Abolitionists laid upon the "rights of man" led

in the Northern states to the sweeping away of the barriers to the suffrage.

One important high spot remains to be treated. Absentee voters, who on account of employment in the National Government at Washington or elsewhere, or who may be at large by reason of unavoidable engagements, ought to be allowed to mail their ballots. This advance movement is now in operation in about one-half the states.

Labor and Other High Spots

No act is passed by the Legislature for the general welfare unless there has been a widespread demand for it—and sometimes not then if it unduly affects private interests. In 1919, in response to the complaints of operatives, the use of suction shuttles was forbidden. Guards for scaffolding and flooring were required. No person under 16 could be employed after 6 P. M. in any manufacturing or commercial establishment and in no mercantile establishment more than one day a week except from December 17-25; and no female in any manufacturing, mechanical or mercantile establishment between 10 P. M. and 6 A. M. except in case of war. This was an amendment to the act of 1909. Children, not completing the course of study in the elementary school (public) and employed as stated, must attend public evening school 18 hours a week for 16 weeks in each calendar year, unless released by school visitors, school committee or Board of Education. Certificates must issue. For violation of these laws the child or guardian could be fined $5 a week. Employers must have each certificate as required or be fined $20-$50 for first offense and $50-100 for each succeeding offense; and must have medical certificate as to the health of the child.

The retirement of state employes was also provided for at one-half the salary for the preceding five years. Such employes must have been employed 30 years and have reached the age of 65; or been employed 25 years or more and have attained the age of 70, or may be retired by the Board of Control. These provisions are exceedingly generous compared with the retirement provision of the General Government which assesses the employes every pay day and limits the annuity, whatever the salary, to $720 a year.

The labor acts of Connecticut provide that all employers shall pay their help weekly (the General Government pays every two weeks). The fine for non-payment weekly is $50. The act of 1919 also provided that no wage broker shall charge more than 3½ per cent a month and no fees for loans not above $300. The assignment of wages must be by both husband and wife. The factory inspectors must to a certain number be women.

The contract of employment is conclusively presumed to include a mutual agreement on the part of both parties to accept the act unless the contract contains a written stipulation to the contrary, or unless a written or printed notice indicating a refusal to accept the act is made by one party to the other, and to the compensation commissioner of the district in which the employe is employed. This refers to the Compensation Act. All employers of five or more persons except casual employes and outworkers must abide by the act. The compensation for partial disability from accident, the fault of the employer or of any of his servants is a weekly sum equal to one-half the difference between the average weekly earning before the injury and what the injured employe is able to earn thereafter, subject to a maximum of $10 per

week for a period not to exceed 312 weeks. For the loss of an arm, the maximum is $2,000. For death as a result within two years the compensation to the surviving nearest relative $10 a week and a minimum of $5 a week for a period of 312 weeks. The burial fee is $100. If there are no dependents, then $750 must be paid to the State Treasurer and be set aside for lawful expenses of the compensation commissioners. If the widow or widower dies before the time of the final payment expires then the payment is made to his or her dependents.

Every employer who does not reject the compensation act must furnish proof to the commissioner of his power to pay by filing with the commissioner, or providing insurance subject to the approval of the commissioner. Certain employers may organize mutual insurance companies.

A compensation commissioner is provided for each of the five Congressional districts. the term being five years. The Governor makes these appointments and the salary is $4,000. Contributory negligence on the part of the injured employe is no defense, nor negligence of fellow employe, nor that the injured man had assumed the risk.

NEWSPAPERS AND PERIODICALS OF CONNECTICUT

BY

CHARLES HOPKINS CLARK[1] AND EVERETT G. HILL

Newspaper editor; born Hartford, Connecticut, April 1, 1848; son of Ezra (Hon.) and Mary (Hopkins) Clark; A.B., A.M., Yale, 1871; L.H.D., Trinity College, 1910; married 1873 Ellen Root (died 1895); married Matilda Root of Hartford, Nov. 1899; connected with the "Hartford Courant" (oldest newspaper continuously published in America) 1871; editor-in-chief, 1890; president and director Hartford Courant Company; director Connecticut Mutual Life Insurance Company, Phoenix Fire Insurance Company, vice-president, director, Collins Company; member Connecticut Constitutional Convention, 1902; director State Reformatory, 1909, Hartford Public Library, Good Will Club; director Associated Press; fellow, Corporation of Yale University, 1910–1925; treasurer and trustee of Wadsworth Atheneum, Watkinson Library, Hartford; Republican; Congregationalist. Clubs: Century, University, Yale (New York), Graduates (New Haven), Hartford (Hartford). Home: 160 Garden street; office, The Courant, Hartford.

[1]After having accumulated a great many data bearing on the newspapers and periodicals of Connecticut, Mr. Clark suffered an accident which has prevented him from writing, and forced him to turn over the notes to some one else. After consulting with Colonel Osborn, Everett G. Hill, an accomplished newspaper man, was requested to take up the work, and nearly all of this article is his.

The authors desire to acknowledge their indebtedness to Arthur S. Barnes. William E. Bulkeley, James M. Emerson, O. S. Freeman, Arthur E. Knox, William G. Pratt, Richard B. Wall and A. C. Worley for valuable assistance.

Hartford County

IT HAPPENS that the earliest newspaper in Connecticut was published in New Haven, but the earliest continued publication, like the earliest settlement in the state, is found in Hartford county. Many towns have claimed the oldest newspaper in America. There are in the country, as there are in Connecticut, many evidences of earlier publication. But the careful statement that the "Courant," whose publication was begun in Hartford in 1764, is the oldest American newspaper, of continuous publication, under the original name and in the original place, has never been successfully controverted and it is no longer attempted.

On Monday, October 29, 1764, there appeared in Hartford, then a city of some four thousand people, a publication of four eight-by-thirteen-inch pages, called the "Connecticut Courant." In accordance with the custom and the caution of those days, it was a "feeler" —a specimen or prospectus, they called it. It carried the promise that it will, "on due encouragement, be continued every Monday, beginning on Monday, the 19th of November, next: Which encouragement we hope to deserve, by a constant endeavor to render this paper useful and entertaining, not only as a channel for news, but assisting to all who may have occasion to make use of it as an advertiser."

There must have been encouragement; it may not have been instant. For the first issue appears to have been on November 26, a delay of only a week. It was printed by Thomas Green "at the Heart and Crown, near the North Meeting-House." In April, 1768, Ebenezer Watson became associated with Green, and

remained until his death in 1777. Thomas Green had dropped out of the firm six years earlier. Hannah Watson and George Goodwin were publishers in 1778 and 1779. Barzillai Hudson and George Goodwin continued it to 1815. Mrs. Watson, perhaps the first woman editor in America, had married Barzillai Hudson. George Goodwin & Sons bought the paper in 1815, and conducted it till 1836, when they sold it to John L. Boswell. At that time Hartford had grown to a population of exceeding ten thousand people, and Boswell established a daily edition in 1837. In 1850 William Faxon was associated with Mr. Boswell, but the firm was dissolved on the death of the latter in 1854. At that time Thomas M. Day bought the "Courant." In 1857 the firm became Day & Clark by the addition of A. N. Clark, who had been bookkeeper with Mr. Boswell. Later it became A. N. Clark & Company.

There was in 1867 a consolidation with the "Press," and the firm of Hawley, Goodrich & Company was organized, consisting of General Joseph R. Hawley, Charles Dudley Warner and Stephen A. Hubbard, who had been editors of the "Press," and William H. Goodrich, who had been with the "Courant." In 1891 the Hartford Courant Company was organized, and since then has published the newspaper. It consisted at the start of those men who had formed Hawley, Goodrich & Company, or their successors, and in that respect the "Courant" has been virtually under the same management from 1867 to the present time.

The original "Connecticut Courant," as indicated by the prospectus, was a publication of the type then familiar. It was made up in great part of "advices" culled from different papers from "the neighboring

Provinces." There was evidently a conception of local news, for the prospectus said: "Great care will be taken to collect from time to time all domestic occurrences that are worthy of the notice of the Publick; for which we shall always be obliged to any of our correspondents within whose knowledge they may happen." The early issues of the paper do not indicate that many such occurrences were reported, or at least that they were thought worthy of the notice of the "publick." The paper was made up almost entirely of news from afar, or what must then have seemed such. Over three of the seven columns in the first issue were filled with foreign affairs. Almost four more had intelligences from distant points in this country. Some twenty lines were devoted to matters directly or indirectly concerning Connecticut. Of these five had to do with a Hartford event—a notice of death. The prospectus anticipated the performing of some service to advertisers, but not then, nor for many years afterward, was there anything like evidence of a substantial revenue from that source.

The list of the "Courant's" publishers for its first century is also a list of its editors, so small was the directing body of a newspaper in those days. The combination of the newspaper with the "Press," in 1857, brought to it almost its earliest literary as distinguished from business talent. The anti-slavery spirit had established in Hartford as early as 1836 the "Christian Freeman," which was edited by William H. Burleigh, a self-educated genius—farmer, printer, journalist and lawyer, originating in Woodstock of this state. He had also founded the "Charter Oak," another outspoken anti-slavery paper. In 1845 he merged the two papers.

He had also founded the "Republican," and in 1850 he joined that to the combination. Hartford became too hot for him, and he sold out soon after and departed. J. D. Baldwin was the purchaser, and in 1852 he sold to M. H. Bartlett & Company, and this paper, then called the "Republican," was edited by D. W. Bartlett and Joseph W. Hawley. In 1856 the "Press" was established as the organ of the new Republican party, and continued independently until 1867, when it was consolidated with the "Courant."

This brought to the old newspaper two men who were destined to bring to it much prestige, and to make for themselves notable names in Connecticut and the country. Joseph R. Hawley, North Carolinian born, was then forty-one years old, a member of the bar and becoming prominent in Republican politics. When he became connected with the "Press" he had dropped the law for editorial work. As editor of the "Courant" he became a power, and though soldier, Governor of Connecticut, Congressman from his district and United States Senator from his state, he never, up to the time of his death, lost his contact with the paper nor his love for the work.

Charles Dudley Warner was three years younger, a native of Massachusetts. He came to Hartford in 1860 as an editor of the "Press," and became through his conspicuous literary ability a force on the new staff when the merger with the "Courant" came. He subsequently became one of the owners of the newspaper, and retained his active connection with it until about 1880. After that his association was more distant, but he was a contributor to the newspaper up to his death in 1900.

The list of men who made their start toward literary

distinction on the "Courant," or who were associated with the paper for a time on their way to greater eminence, is a long one. But the name that stands out in the last quarter-century of the newspaper for purely journalistic eminence is that of Charles Hopkins Clark. Immediately on his graduation from Yale in 1871 he became associated with the paper, and has been with it continuously since. He has been its editor-in-chief since 1890, and for some time past has been a considerable owner and president of the Courant Company.

Other Hartford Newspapers

The record of newspaper establishment in Hartford shows a hiatus from 1764 till 1783. On September 1 of that year Bavil Webster started a weekly which he called the "Freeman's Chronicle; or the American Advertiser." His connection with it lasted only nine months. Zephaniah Webster, who took it on June 3, 1784, continued it only a little more than a month. The last issue was on July 8, 1784.

Though there is no apparent connection, it is a coincidence that only four days later the "American Mercury," a paper with a much more pretentious history, was born. Joel Barlow and Elisha Babcock published its first issue on July 12, 1784. Mr. Barlow retired with the issue of November 14, 1785, and Mr. Babcock continued the publication. He was assisted by his son, Charles Babcock, and after January 6, 1813, the firm became Babcock & Son. The publication continued until 1833, when it was absorbed by the "Independent Press." Before that date the paper had passed to the ownership of G. F. Olmstead, Charles Babcock, who had succeeded his father, having abandoned its publication.

The "Mercury" established in its time a reputation for positive views and individuality, not always giving entire approval to what its neighbors did. It was Anti-Federal, and showered ridicule on the members of the Hartford Convention (1814–1815) celebrating its first anniversary by printing the names of the members as "a mark of disgrace," and promising to repeat the performance each year. The attempt of the Hartford Democrats to accent the reproach by publicly half-masting a flag for the members had its entire approval, but was not repeated another year. The "Echo" was a publication of the "Mercury" that was famous in its time, being a production of "Hartford wits."

The "Independent Press," which absorbed the "American Mercury," first appeared on July 1, 1833. Hon. William James Hamersley, later mayor of Hartford, was its editor. It lasted some two years.

The "Hartford Gazette" was a semi-weekly established in January, 1794, by Lazarus Beach and Prince Storrs. In the following July they enlarged the name to the "Hartford Gazette and Universal Advertiser," but the name proved too heavy and they returned to the original title in October. Meanwhile, the publishing firm had become Lazarus Beach and Ira Jones. The paper was at first a small quarto, but was enlarged to a folio in July to carry the enlarged name. Its last issue in Hartford was on March 19, 1795. The publishers then removed to Newfield and established the "American Telegraphe" on April 8.

The "Connecticut Intelligencer" had a brief existence in Hartford in 1804. Oliver Steele was the founder, but after three months he removed to the "New Eng-

land Republican" in Danbury, and the "Intelligencer" was discontinued.

The "Connecticut Mirror" was a conspicuous Federal sheet in the acutely political years from 1809 to 1821. In the remaining seven or eight years of its life, it seems to have been more literary than political. Charles Hosmer was its founder, and in 1811 he formed a partnership with Horatio G. Hale, which lasted for three years. In 1816 Benjamin L. Hamlen succeeded Mr. Hosmer. In 1818 Abner Newton, Jr., became a partner, but later in the same year this partnership was dissolved and William L. Stone and Solomon Lincoln became proprietors and publishers. Mr. Lincoln became the sole publisher in 1820. There were two years after that in which the paper seems to have languished, but in 1822 it was revived in a different character through the editorship of John G. Brainard, famous in his time as one of Connecticut's poets. The last publishers of the paper were Goodsell & Wells.

One of the most famous editors of the "Mirror" was Theodore Dwight, who was secretary and afterward historian of the Hartford Convention. The secret journal of the Convention was printed in that office, Charles Hosmer setting up and printing it himself, and distributing the type before he left the office each night. Mr. Dwight left the paper in 1815. He was a native of Massachusetts, had been a member of Congress from Massachusetts for one term before coming to Connecticut, and from 1817 to 1835 he conducted the "New York Daily Advertiser."

John Gardner Calkins Brainard, born in New London, has been called "the poet of the Connecticut valley." His contempt for politics, which he is said to have dis-

missed with a jest, made his regime on the "Mirror" comparatively unpopular, but he pleased those of literary taste greatly by the poems he dashed off in response to the printer's call for "copy." He left the newspaper in 1827, and died from tuberculosis the following year.

The "New Star" was a curious little publication which had a single issue, February 2, 1796. Its size was 16mo, and it was published by Apollos Kinsley. The issue contained this explanation: "This small paper is printed for the purpose of making experiments with a model of Printing Press on a new plan, lately invented by the printer hereof. Though the press is by no means complicated, it puts the ink on the types, carries in the papers and prints two sheets at a time, and will deliver them well printed at the rate of more than two thousand sheets an hour, by the labor of one person only."

Frederick D. Bolles and John M. Niles made up the "F. D. Bolles & Company" who in 1817 established the "Hartford Times," the first issue being on January 1. Bolles was a practical printer. Niles, then a young and little known lawyer from Poquonock (who subsequently rose to a national reputation as United States Senator and Postmaster-General under President Van Buren in the fifteen years following 1835) was the editor. For thirty-seven years, from 1817 to 1854, he was an active editor or contributor to the "Times." In 1819 he was its sole proprietor, Bolles printing it under contract.

Later in 1819 John Francis of Wethersfield and Samuel Bowles of Hartford became managers of the "Times," and the following year they changed the name to the "Times and Weekly Advertiser." This style was soon after abandoned. It remained a weekly pub-

lication until 1841, when the daily "Times" was started. The weekly edition was continued until 1922. This was the Samuel Bowles who later loaded some type and a press on a flatboat and went up the river to found the "Springfield Republican."

In 1826 the "Times" passed into the hands of Benjamin H. Norton, later consul to Halifax, and John Russell of Hartford. That year came Gideon Welles to the editorial chair, destined to be for many years afterward a power in the newspaper. He was chief adviser to President Andrew Jackson, and Secretary of the Navy under Lincoln. He was a contributor to the newspaper up to 1854. In February, 1837, Charles S. Jones was admitted to the partnership, and later became the principal owner. John D. Watts was a partner for a brief time, but in 1838 Mr. Jones, then in full control, sold his holdings to Judge Henry A. Mitchell of Bristol.

On January 1, 1839, Judge Mitchell took into partnership Alfred E. Burr, who had grown up in the "Courant" establishment from printer's boy to foreman of the printing room. Though only twenty-three, he was a young man of experience in the management of a newspaper, and with decided political and literary ideas as well. By hard work and constant application to the jobs of printer, foreman, organizer and business manager, he brought the paper out of the seriously run-down condition in which he found it, and so got on his feet that in 1841 he was able to buy out his partner's interest, and become the sole owner of the newspaper. That was the year, too, when he established the daily edition. They were still working a hand press which would print five or six hundred papers an hour, on one

side. They owed $4,000. They had a circulation of 300 total. The courage, energy, perseverance and directive genius of Alfred E. Burr, continued through forty-one years up to his death in 1900, advanced that newspaper, so situated, to the position of largest newspaper, with the most valuable property, in Connecticut. Seventeen years later, when it celebrated its centenary, it had a circulation of 28,000, it was set from seventeen Linotypes and two Monotype casters, and printed on two of the largest type of octuple presses, while a force of 160 persons devoted their efforts to its production. Three years after that it removed to its new building, by far the most distinguished newspaper plant in the State, in design and construction a noble monument to the printing art and the journalistic profession.

In 1854 Alfred E. Burr associated with him his brother, Franklin L. Burr, and the publishing firm became Burr Brothers. Twenty-five years later the former's son, Willie O. Burr, was admitted to the partnership, and in 1890 Alfred E. Burr transferred the entire newspaper property to his son, Franklin L. Burr having some time before retired from the partnership because of ill health. The senior Burr remained active in the management of the paper, however, until his death ten years later.

Willie O. Burr, whose death occurred in 1921, had then been associated with the newspaper for fifty-nine years, and for thirty-one years was its editorial head.

The Burr Printing Company was organized for the production of the paper in 1909. Since Willie O. Burr's death, the newspaper has been continued by virtually the same heads of departments who conducted it for the last few years of his life.

Alfred E. Burr
Editor of the Hartford Times.

F. B. Cooke
"Father Cooke" of the Waterbury American.

Home of the Hartford Times. Donn Barber, 1871–1925, Yale 1893, Architect.
Columns and Other Material Used in its Construction Salvaged from Dr. Parkhurst's Church in New York, Stanford White, Architect.

The greatness of Alfred E. Burr consisted largely in being able to associate with him men of not only state but national magnitude. Two names in addition to his and his family's stand out in the history of the newspaper. The association of Samuel Bowles the elder with it was interesting but largely incidental. John M. Niles had ceased to have an ownership in the paper before Mr. Burr came in, but he remained as editor until his public duties commanded all his attention, and was a contributor to its columns up to 1854. He was United States Senator from 1835 to 1839 and from 1843 to 1850, and in the interim was Postmaster-General under President Van Buren.

It was under the proprietorship of Benjamin H. Norton and John Russell that Gideon Welles, then a young man of twenty-four, came to the "Times" as editor, and to a temporary interest in the ownership. That was in 1826. His active connection with the paper continued for only ten years, but up to 1854, while he was a member of the Legislature, comptroller of the State and chief of the bureau of provisions and clothing in the Navy Department at Washington, he was a frequent contributor to its columns. He had been a Democrat, but his strong convictions on the slavery subject made him early a member of the new Republican Party. He was its first candidate for governor in Connecticut, chairman of the Connecticut delegation to the convention which nominated Lincoln in 1860, and Secretary of the Navy from 1861 to 1869. After that he retired to literary work, with occasional participation in politics.

George Denison Prentice, a writer of brilliance and a poet of note, later one of the founders and for years the editor of the Louisville, Kentucky, Journal, began

his journalistic career in Hartford in 1828, and for two years edited the "New England Weekly Review," just established. He gave it a great start and prestige, and was succeeded by none other than John Greenleaf Whittier, whom Prentice discovered and chose to continue his work in Hartford. Naturally, the "Review" was a literary rather than a political journal. Whittier's connection with the "Review" and with Hartford lasted about two years. His mark upon Connecticut journalism seems not to have been very enduring, but Whittier, in later years, regarded it as lightly as anybody else could possibly have done. In a letter to a friend who fifty-two years later asked him to describe his life in Hartford he wrote: "I took some pleasant trips into the country to Talcott Mountain, New Haven, Litchfield and other places. There is really nothing worth telling of." His interest in politics is indicated by his remark: "I was chosen a delegate by the Connecticut National Republicans to the convention which nominated Henry Clay for the presidency, but was not able to go."

The "Review" lived twelve years after Whittier's departure, and through a succession of experiences. Franklin G. Comstock purchased a half interest in it for his son, William G. Comstock, and in 1832 the publishing firm was Hanmer & Comstock. About then it was the leading Republican newspaper of the State, and in 1833 the publishers established it as a morning newspaper, the first daily in Hartford. In 1834 Mr. Comstock bought out his partner's interest, and in 1836 sold it to a number of political leaders. It expired in 1844.

A second "New England Review," having no probable connection with the first, existed for a short time a few

years later. Wells & Willard established the "Columbian" in 1844, sold the next year to Nathan C. Geer, and he sold it in 1846 to Walter S. Williams, who renamed it the "New England Review." Lucius F. Robinson was its editor for a time after his graduation from Yale in 1843. In 1848 J. Gaylord Wells bought the paper and renamed it the "Connecticut Whig," but Mr. Robinson remained as editor. In 1849 the "Courant" absorbed it, as also it had in 1845 absorbed the "Daily Journal" and the "Weekly Journal," which had been published by Elihu Geer.

There is a scattering of short-lived journals of that early period, some of them political, others literary. About 1834 Thomas H. Seymour, who was afterward Governor of Connecticut and United States Minister to Russia, edited the weekly "Jeffersonian," of which Henry Bolles was publisher. In 1835 John B. Eldridge, with previous experience in New London and Springfield, established the "Patriot and Democrat." When he was appointed Marshal of Connecticut his paper was merged in the "State Eagle," conducted by James Holbrook, and discontinued in 1842. Mr. Holbrook, wealthy and president of the Connecticut Fire Insurance Company, died in 1882.

Literary publications, strictly magazines, included the "Parterre," 1829; Isaac Pray, Jr.'s, "Pearl," 1830, removed to Boston 1835; the "Bouquet," established by Melzar Gardner in 1831 and merged with the "Pearl" in 1833; the "Museum," 1836 and the "Nonpareil" edited by William H. Burleigh in 1847.

The Later Hartford Period

The period of greatest publication activity in the Capitol city, judged by numbers, was apparently between the close of the Civil War and the opening of the World War of 1914. For much of that time the city had four daily where it now has two, and an exaggerated number of weekly and other publications. The first of these was the "Hartford Post," which came in 1867 into the vacancy in the afternoon field caused by the merger of the "Press" with the "Courant." It had been established as a morning newspaper nine years earlier, with an accompanying weekly edition, by J. M. Scofield. He sold both papers to W. P. Fuller and E. G. Holden in 1865. They sold in 1866 to David Clark, and he again sold to a company consisting of the Hon. Marshall Jewell, Ezra Hall and H. T. Sperry.

It was in 1868, after it had become an afternoon paper, that the "Post's" era of real importance began. Isaac H. Bromley of the "Norwich Bulletin" was made a partner, though he seems never to have had an active connection with the paper, and resigned in 1873. To the Jewell-Hall-Sperry firm was added J. A. Spalding, who remained with the paper, later as business manager, for thirty years. The surviving partners purchased Mr. Jewell's interest after his death in 1883. The paper was started as a Douglas organ, but after Mr. Scofield's retirement it became a Republican paper.

In 1888 John Addison Porter, native of New Haven, purchased an interest in the newspaper and became its managing editor. The next year he became editor-in-chief and full proprietor. He was a graduate of Yale in 1878, had studied law and been connected with the

"New Haven Palladium," "Hartford Courant," "New York Observer," "New York Tribune" and other papers. He had also conducted a publishing business in Washington, and while there was appointed by Senator Platt a clerk on the select committee on Indian affairs.

On taking up his work in Hartford, Mr. Porter became greatly interested in political affairs, state and national. He was a candidate for Governor in the Republican convention of 1894, and in 1896 and 1898 he was again a candidate, each time being unsuccessful. He was an enthusiastic McKinley man in Connecticut, and was influential in persuading the Connecticut delegates to the St. Louis convention to vote for the Ohio candidate. In Mr. McKinley's first term the office of president's private secretary was enlarged to that of Secretary to the President, and Mr. Porter, who had been somewhat influential in bringing about the change, was made the first incumbent of the new position. His removal to Washington withdrew his attention from the publication of the "Post," and in 1899 he sold the newspaper to a group consisting of Edward L. Clark, Herman D. Clark and Henry E. Taintor, newspaper men who came on from the west. John A. Spalding became business manager in 1902, and continued for several years.

Two new names appeared in the directorate in 1905, Edward L. Clark remaining president—A. E. Hasbrook and J. S. Richardson. In the course of the next two years there was an entire change. Christie E. Hayne was president and treasurer. G. L. Dickinson and J. E. Dennis entered the ownership. In 1908 Charles F. Palmeter was president of the company, and the interesting addition to the directorate was the name

of John Rodemeyer, as vice president. John G. Wilson was president in 1910.

In 1911 came a marked change in ownership which lasted for eight years, the purchasers being all Hartford men, and the ownership returning entirely to that city for the first time in twelve years. The new purchasers were Dr. Henry McManus, H. C. Ney, Loomis Newton, Andrew J. Broughel, John F. Moran, Thomas A. Shannon and J. E. Dennis. Dr. McManus was president.

By another complete overthrow in 1919 the newspaper passed into the hands of an entirely different Hartford group. They were Stewart N. Dunning, who became president and treasurer, Fred P. Holt, Harrison B. Freeman, Harry B. Adsit, Harry A. Allen and Lucius H. Holt.

The final change took place in May, 1920, when the property was taken over by Thomas J. Spellacy, who became president and treasurer, and Thomas A. Smith as secretary. But many changes and a continued run of adversity had brought the newspaper into a very precarious condition, and that fall the new owners accepted the offer of purchase made by the "Hartford Times," which immediately discontinued the publication. The "Hartford Post's" closing issue was on October 6, 1920.

In 1883 D. C. Birdsall and William Parsons established the "Hartford Telegram" as a morning Democratic newspaper. As early as 1885 a reorganization was needed, and Mr. Parsons withdrew, Colonel E. M. Graves joining with Mr. Birdsall, and becoming editor. The management continued thus for two years, but in 1887 Mr. Birdsall withdrew. At that time the "Telegram" made much of the distinction of being "the only

Democratic morning paper in the state." But it did not prosper. Geer's directory for 1888 tells us: "It ceased publication, under writ of attachment, July 2, 1888."

There was a break of only a few months. Next year appeared the "Telegram-Record," published by Frank G. Grogan and Jule H. Stoll, the latter of Springfield. Its first issue was on January 22, 1889, and the information was that it was "the outcome of the 'Hartford Telegram' and the 'Hartford Morning Record,' consolidated upon that date." Mr. Stoll continued with the paper only about a year, and Mr. Grogan continued it alone. Mr. Grogan died in 1890. The following year Edward H. and Edward R. Doyle came into the firm, and carried on the paper with Mrs. Anna M. Grogan, widow of Frank G. The hyphen and the "Record" were dropped in 1891. This arrangement continued, as to ownership, substantially unchanged until 1906. That year the paper was purchased by Joseph H. Byrne and by D. W. Bowles, who said he was a relative of the "Springfield Republican" editor. But his prestige and the change did not bring permanence to the paper. It went into a receivership in 1907, and disappeared by way of the bankruptcy court.

The "Hartford Journal" was established in 1867, though for its first two years it was called the "Advertiser." It was then purchased by Captain Joseph H. Barnum, who gathered up with it the "Traveler's Friend" and the "Gas Light," and renamed the combination. In April, 1874, it appeared in enlarged form as the "Sunday Journal," still published by Captain Barnum, who remained its editor and publisher up to his death on August 19, 1901. It was then published by

his son, Charles H. Barnum, until its discontinuance in 1920. Its publisher had established in 1901 a Saturday edition, which he continued for its closing twenty years.

The "Globe" was published for forty-four years as a Sunday newspaper only. It was founded in 1876 by C. W. Griswold, who continued it for only three years, selling in 1879 to Charles C. Hubbard. Allen Willey purchased it from him in 1884. Eleven years later the paper was sold to William L. Linke, E. J. Andrews and Emil F. Linke, Frederick G. Perine coming in as editor and manager. There were a number of changes in holdings in the following ten years, Mr. Andrews retiring soon and Emil F. Linke selling his share to his brother. The company was incorporated in 1907. In 1905 Frank G. Macomber came to the paper, and in the following thirteen years was business manager, general manager and editor. In 1919 T. J. Spellacy, Alexander Troup of New Haven and John F. Crosby and J. E. Dennis purchased the property. Their plan for reorganization was interrupted by an offer of purchase from the "Hartford Courant," which they accepted, and the "Courant" discontinued the "Globe" in 1920. The "Courant," which had established its Sunday issue in 1913, thus cleared the field.

The "Hartford Evening Herald," by the C. E. Woodruff Company, ran from October 3, 1883, to February 7, 1884. It was one of many brief attempts at daily and weekly publication of which the record has been nearly or wholly lost. No less than thirty-five secular newspapers were started in Hartford in the period from 1824 to 1924, of which the survival is substantially limited to two representative journals.

Religious and Special Publications

In the oldest center of Connecticut Congregationalism, Hartford has naturally seen the foundation of a number of religious journals. The most important of these was the "Congregationalist," which was established there January 19, 1839. Elihu Geer was its first publisher. It was transferred to Boston, however, after two years. The "Religious Herald" was established in 1841 by D. B. Moseley, and after his death was published by his sons up to 1897. For the last three years of its life—it was discontinued in 1900—Reuben H. Smith was the publisher. Before that was the "Connecticut Observer," published from 1825 to 1841 by Hudson & Skinner, of which the Rev. Horace Hooker was the editor. The "Church Review" was published from 1899 to 1905 in Hartford.

Outside the Congregational sect perhaps the most important journal identified with Hartford is the "Churchman," prominent organ of the Protestant Episcopal church. This was founded in New Haven as the "Chronicle of the Church," later the "Calendar," and was brought to Hartford in 1836 to be the "Churchman." It was sold and removed to New York in 1877. The "Christian Secretary," an important Baptist paper, dates back to 1822 in Hartford. It was edited in its time by such men as Gurdon Robbins, Philemon Canfield, Normand Burr and S. Dryden Phelps. Dr. Phelps was one of the last editors, serving from 1876 to 1892. The publication ceased in 1895.

The Catholic church has for many years had some of its most important Connecticut publications in Hartford, prominent among them the "Catholic Transcript,"

which in 1824 was etablished in its own plant after a career of almost fifty years. In 1836 an earlier and more general publication, the "Catholic Press," was established in Hartford, but was later removed to Philadelphia.

"Young People at Work" was published from 1894 to 1898, Albert H. Crosby being the manager. In the latter year it ceased, its mantle being taken up by the "Church Review," under the same manager. That also was discontinued in 1906.

These are the more prominent of a list of over twenty distinctively religious journals which were founded in Hartford and had a more or less extended existence there. Few of them are found there now, however.

There is a still longer list of special publications, some literary, some trade, some unclassified, which issued numbers in Hartford. Some are found only in the newspaper directories, some only in the Hartford directory. Many are not to be identified with any publisher; some were frankly fatherless. Most were the victims of infant mortality. A few with somewhat distinctly preserved records should evidently be included in the Hartford list.

Many libraries contain carefully preserved copies of a publication of which many Connecticut people had high hopes in the early years of the century. It was the "Connecticut Magazine," a successor of the "Connecticut Quarterly." It was carefully edited and contained articles of great literary or historical merit, illustrated by excellent drawings or photographs, and the whole executed in superior form. Its early issues were in 1902, sponsored by the Connecticut Magazine Company. In 1906 it reached its highest excellence.

Then it was printed in Hartford but had its business offices in New Haven. Edward B. Eaton was the managing director, Herbert Randall the treasurer, and Francis Trevelyan Miller the editor. It ceased publication that year, evidently because the ambition of the publishers to produce a meritorious magazine ran ahead of the financial resources of the company.

Between 1876 and 1894 H. H. Stoddard published at Hartford the "American Poultry Yard," in its time a famous poultry magazine. In the later years of the publication he conducted together the "American Poultry World," which was monthly, and the "American Poultry Yard," which he said was the only weekly journal devoted exclusively to poultry. Mr. Stoddard removed to Nebraska in 1891, and for a time continued the publication at long distance, but it was discontinued in 1894.

The "American Cyclist" was published in Hartford from 1890 to 1898, the palmiest days of the bicycle era. The city was the home of the "American Journal of Education" from 1897 to 1900.

The "Suburban News" was established in 1899 by William Palmer, and during its career, which extended for seven years, it was the general title for a chain of publications, circulating mostly outside of Hartford. In 1906 it published the "Home News," whose central town was Glastonbury, the "Farmington Valley Herald" and the "Collinsville Record." That was the year when its activities ceased, and the publisher was R. E. Pyne.

The year following the admission of women to the suffrage "Hartford Women" was established, and still continues. In 1920 the "Connecticut Hebrew Record" was established, and Dr. George H. Cohen, assistant United States attorney, was the editor. Dr. Cohen has

since disposed of his interest, and the paper is combined with a Boston publication. The "Labor Standard" was started in 1908, as a weekly. The "American Standard" monthly was established in 1921, and in the next year the two were merged.

Early Papers Outside of Hartford

As early as 1797 there was publication in Hartford county outside of the central city, but it was not in the settlement antedating Hartford. On June 14 of that year Havila and Oliver Farnsworth issued in Suffield the first number of a weekly which they called the "Impartial Herald." A year seems to have been about enough for these two, and with the issue of July 17, 1798, the publication was taken over by Edward Gray and Rescome D. Albro. Mr. Albro remained with it only until the end of the year, and after January 1, 1799, the paper was published by Mr. Gray alone. It was, however, published for only six months. The last issue of it, so far as can be verified, was that of June 4, 1799. No complete set of the files appears to be in existence, and none of the copies is at present in Connecticut collections.

A publication that in a manner belongs in the same class is the "Weekly News" of Granby, published for a time in 1840 and afterwards (its exact dates cannot be obtained). It was a curious product of four pages, each of two columns and about six inches square. Jewett & Dibble were the publishers. There was some news, or what passed for such, but the reporter was minded to be facetious.

> Sarah says she's twenty-two.
> She said so fifteen years ago,

may not have been intended as news, nor this: "There are prettier girls in Granby than in any other town about." But the returns from the New Hampshire election were an attempt at the offering of information. There were some figures, and the reader has mainly to be satisfied with the conclusion that "from the best information we possess we are convinc'd that the politics of the Granit state is the same this, that it was last year." There is half a column—three inches, all told, of advertisements. One line picquantly but rather disrespectfully says that "Queen Vic is married."

Newspapers of New Britain

The earliest publication in New Britain was the expression of a group of young women, of whom Miss Nancy Smith, an accomplished teacher, was the leader, of their desire to preserve their literary products in more substantial form than manuscript, and to extend the benefits of them to many friends. It was bi-weekly, and they called it the "Shepherdess." That was in 1831. The early contents were essentially essays, high in their literary quality, elevating in their character. Later the publishers got the true newspaper sense, and included a few items of the more important passing events, usually with comments on them. This was never a business venture, and was discontinued after a little more than a year. The paper was of four pages nine and one-half by six inches. The marriage of Miss Smith had given her other things to occupy her mind.

The beginning of newspaper publication as a business in New Britain dates from March 23, 1850, when James M. Phelps started the "New Britain Advocate," weekly. It was given a great start by its first number, a special

recording the return from abroad of Elihu Burritt, the town's most distinguished citizen, with many honors on his head. Then New Britain was "Our Village" and its people "Our Villagers." The course of true journalism did not run smooth, for within three years there were several changes in the ownership and name of the paper. The "Advocate" was early discontinued. Shortly afterward the "New Britain Chronicle" took its place. In 1851 the name of the paper became the "Journal and Chronicle." O. P. Brown, who was for a time one of its publishers, found there was more money in making patent medicine, and removed to Brooklyn. Mr. Phelps, the founder, went to Middletown, then to Meriden, whence in 1852 he issued the "Connecticut Organ and New Britain Journal." Of that Orville H. Platt, the same who was later United States senator, was for a time the editor. The paper, later sold to James Lewis, who published the "Whig," disappeared as a New Britain journal.

The next venture was that of Valentine B. Chamberlain, who started the "New Britain News" in 1860. What it might have been no one can say, for he answered his country's call to the Civil War the next year, and it was no more. It was succeeded, however, by the "True Citizen," published by L. M. Guernsey, and continued from 1861 to 1866 as a weekly family journal. It was New Britain's servant for news of the Civil War.

J. N. Oviatt in 1866 purchased the printing plant which had issued the "True Citizen," and there in April of that year published the first number of the "New Britain Record" as a weekly. He made a somewhat larger paper than its predecessor, but of the same general character. He continued alone until 1868, when

Samuel Baker came in, and the firm became Oviatt & Baker. This continued until 1880. On January 1 Mr. Baker bought out his partner's interest, and continued alone until the admission of his son, Francis W. Baker, in the following year. The latter soon assumed the entire ownership, and published the paper until his death in 1887. After that his widow, Mrs. M. P. Baker, continued it until March, 1888. Then the business was purchased by James G. Bacon and James L. Doyle, who continued it as Bacon & Doyle. Mr. Bacon removed to Hartford in 1890, and Mr. Doyle continued the business until his death in 1924. The ownership was on January 1, 1917, vested in a corporation, the "New Britain Record Company." A daily edition of the paper was begun in 1876 and still continues, the weekly having been discontinued in 1900.

Establishment in March, 1876, of the "New Britain Observer" was the real beginning of that publication business with which the name of Vance is still associated in New Britain. Robert J. Vance and J. O. Stivers were the founders of the "Observer," but the latter retired the next year. R. J. Vance went on with the business, and later expanded to R. J. Vance & Company. The newspaper was a weekly, devoted to "local news and general intelligence." Robert J. Vance was in 1886 elected representative of the first district in Congress, and served for two years from 1887. Meanwhile, the "New Britain Herald" had been started by the Adkins Brothers on April 3, 1880. The company became the Adkins Printing Company later in the year, and sold the paper in 1881 to C. E. Woodruff, who organized the Woodruff Publishing Company. He bought also the "New Britain Times," which had been started in 1880,

and transferred its subscription list to the "Herald." A semi-weekly edition of the paper was started in January, 1882, and on December 2, of the same year, the "Evening Herald" was begun, whereupon the weekly edition was resumed. It was discontinued in 1893.

Between the election of Mr. Vance to Congress in 1886 and his assumption of his duties at Washington on the following year, he disposed of his "Observer" to the Woodruff Publishing Company. But in September of 1887 the "Herald" and its plant were sold to Frank L. Blanchard of New York. Soon after the consolidation with the "Observer" a new "Herald Publishing Company" was formed, of which the members were Frank L. Blanchard, Robert J. Vance and James Cochrane, who had been connected with the "Observer." The new company took possession on October 1, 1887, and still continues the publication of the newspaper under that name, the present holders of the stock being Mrs. Matilda Vance, Miss Agnes Vance and Johnstone and Robert C. Vance. The Hon. Robert J. Vance was active in the publication up to the time of his death in 1901. Mrs. Vance assumed much of the burden of directing the paper from that time through the trying period until her sons could take up the business.

The "New Britain Times," mentioned above, had been founded in 1880 by Cornelius Maloney and Cornelius Loughery, but was published only ten months to February, 1881, when C. E. Woodruff purchased it.

Thomas H. Kehoe and Thomas Crosby started in April, 1888, the publication of the "Independent," a weekly with a leaning toward the labor cause, but ostensibly devoted to the discussion of questions relating to

the moral, social and political welfare of the community. It was continued by Mr. Kehoe up to 1902.

The "Circle" was a local weekly started for New Britain and surrounding towns on November 24, 1886. F. S. Sneath, the proprietor, for some reason saw fit in 1893 to change the name to the "Bee," under which title he continued it to its finish in 1900.

The name of the "New Britain News," as established by Valentine B. Chamberlain the year before the Civil War, was revived in 1888 by James W. Ringrose. He conducted it as a Democratic weekly until 1892.

Two dailies of brief duration also belong to the later period. The "Morning Dispatch" appeared in 1894, published by the Dispatch Publishing Company. In 1896 the president of the company and the editor of the paper was Herbert Anson Stocking, who for the last ten years of his life was managing editor of the "Ansonia Sentinel." The following year the head of the company was B. R. Cowan. The year after that, in 1898, the paper ceased publication.

That same year, apparently without connection, the "Dispatch" was succeeded in the morning field by the "News," probably no relation to the weekly of the same name that had suspended ten years earlier. It was published by the Calumet Building Company, whose president and the manager of the paper was Charles A. Woodruff. A year later the paper was published by Francis Atwater of Meriden, and in 1901 it ceased publication.

Other County Newspapers

The Bristol Press was established as a weekly by Rev. C. H. Riggs in 1871. The first issue was published on March 9th and for seventeen years Mr. Riggs was the

editor and proprietor. In August, 1888, Mr. Riggs sold the business to Messrs. Haviland and Duncan, Thomas H. Duncan becoming editor and manager and remaining as such until December, 1891, when the Bristol Press Publishing Company purchased the business. In March, 1902, Arthur S. Barnes, a native of Bristol, who had graduated from Yale College in 1892, came to the paper as editor and manager. In 1910 the Press was changed from a weekly to a semi-weekly and on October 25, 1916, it became a daily, as which it is at present published.

In 1908 the Bristol Press Publishing Company purchased the Farmington Valley Herald and in 1911 the New Hartford Tribune. These two papers have been consolidated into one weekly paper, now published every Thursday as the Farmington Valley Herald and circulating as a local newspaper in the towns on the Central New England Railroad between Hartford and Winsted. The Bristol Times was published for a short time in the early eighties but did not long survive. Charles W. Eaton, in 1901, established the Bristol Daily Journal, which lasted a little over a year and then about 1912 he established the Bristol City Ledger which, as a weekly, was published for about two years.

Manchester's Newspapers

The history of the newspapers of Manchester from their beginnings up to 1924 is virtually covered by the publishing career of Elwood Starr Ela, founder and for forty-two years publisher of the "Manchester Herald." Born in Decatur, Illinois, Mr. Ela came twenty years later with his father, a Methodist minister, to Manchester. The newspaper urge got him before he could

finish his course in Wesleyan. He first started a weekly paper in his native town, but a year later came back to Manchester and started the "Herald" as a weekly in 1882. In 1904 he made it a semi-weekly, and a daily in 1914. His death occurred in the summer of 1924. The publication is carried on by E. Hugh Crosby and Thomas Ferguson.

William J. Flood came to South Manchester in 1893 and started the "South Manchester News," as a weekly. It continued to serve the news supply and business interests of that portion of the town as a weekly for twenty-eight years, when it was made a semi-weekly in 1921. Mr. Flood's health had been proving unequal to the growing task of handling the publication, and he turned it over to his son, Joseph W. Flood, who in 1923 expanded the paper to a daily. The "News" suspended publication early in 1924.

Other County Newspapers

East Hartford has two weekly newspapers, each with a standing of approaching forty years. The "East Hartford Gazette" was founded by Henry B. Hale in 1885, and has been published by him continuously up to this time. The "American Enterprise" was established in 1888 by James A. Martin, and has been continued to the present. The "Elm Leaf" was published from 1871 to 1878, and then faded away.

Enfield has had three newspapers, all in Thompsonville. The "Gazette" was published from 1871 to 1878 and then lapsed. The name was revived again from 1892 to 1895, but that venture also failed. Meanwhile, the Parsons Printing Company had established the "Thompsonville Press," with F. P. Parsons as editor.

In 1910 a group of citizens headed by William J. Mulligan, lawyer, and since internationally identified with the Knights of Columbus, acquired the paper, and formed the Advance Printing & Publishing Company, which has since issued the "Press."

Berlin had its weekly newspaper from 1891 to 1908, the "News." It suspended in the latter year, but was succeded by the "Record" in a few months. The publication was only until 1910.

Collinsville in the town of Canton has had two newspaper ventures of its own, the "Farmington Valley Sentinel," from 1880 to 1881, and the "Farmers' and Mechanics' Journal," from 1887 to 1892.

Southington had three weekly newspapers, all founded the same year—1873. One has survived. The "Reporter" was briefest, lasting only six years. It was published by the printing firm of Cochrane Brothers. The "Southington Phoenix" had C. S. Havilard as editor in 1882, William J. Holden in 1895, and in 1904, or thereabout passed into the hands of the Northampton Valley Publishing Company, which merged it in the "Southampton News." Later it was the News & Times Company, publishing also the "Cheshire-Hamden Times."

The "Windsor Locks Journal" was established in 1880 by the late Sherman T. Addis. In 1895 the paper was acquired by John M. Morse. In 1910 the business was incorporated under the name of The Journal Printing Corporation.

The only newspaper published regularly in Farmington of which any record appears was at the Unionville end of the town, where the "Tunxis Press," weekly, was printed from 1897 to 1908. Wethersfield had its own

newspaper for a few brief years, the "Farmer," from 1886 to 1893.

New Haven County

The first paper published in New Haven was the "Connecticut Gazette," a weekly, whose publication was begun by J. Parker & Company in 1755 and its publication by that firm was suspended in April 14, 1764. James Parker was a printer and a friend of Benjamin Franklin, another printer. The "Gazette" was at first printed "near the hay market," and afterwards "at the post office, near Captain Peck's at the Long Wharf." Mr. Parker was then the postmaster, having obtained his appointment from his friend Franklin, Franklin and James Hunter being joint deputy postmasters-general for America, and Mr. Parker was the first postmaster at New Haven as well as the first "journalist" to found a newspaper there. The "Gazette," instead of being firmly founded on a rock, "went on the rocks," and in No. 471, April 14, 1764, this announcement appeared: "As the encouragement for the continuation of this paper is so very small, the printers are determined to discontinue it after this week. They request all those that are indebted to make speedy payment."

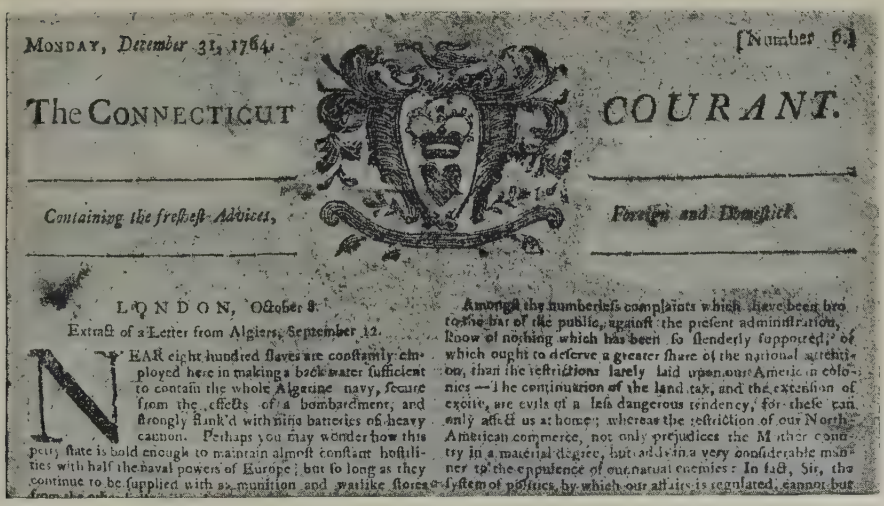
But though the "Gazette" had apparently died it came to life July 5, 1765, under the management of Benjamin Mecom, a nephew of Benjamin Franklin, who had taught him the printer's trade. But Franklin's teaching and example could not insure a success to his nephew in the newspaper business in New Haven. So in No. 596, February 19, 1768, this appeared: "The printer of this paper now informs the public that he is preparing to move from this place with his family and that he chiefly depends on his debtors for something to

pay the expense. Since he now discontinues this 'Gazette' it may not be improper to say that all persons may be supplied with a newspaper by Messrs. Thomas and Samuel Green at the Old State House, where other printing work is done and books bound."

The newspaper which all persons might be supplied with was the "Connecticut Journal and New Haven Post Boy," which had been started by Thomas and Samuel Green in October, 1767, about four months before the second death of the "Gazette." What is now the "Journal-Courier" of New Haven got part of its name from the "Connecticut Journal and New Haven Post Boy." In 1775 the words "and New Haven Post Boy" were dropped from the original name and the paper was published as the "Connecticut Journal" until 1799, when for a few months "Weekly Advertiser" was added to its name. In 1809 the word "Advertiser" again appeared but was soon dropped. After several changes in the ownership of the "Connecticut Journal" it became the property of Woodward & Carrington, who were also owners of the "Connecticut Herald," a weekly which was started by Comstock, Griswold & Company in 1804. Mr. Woodward, while sole proprietor of the "Herald," had started the "Daily Herald" November 26, 1832. John B. Carrington, who had learned the printer's trade in the office of Mr. Woodward, became his partner January 1, 1835. Not long afterwards the "Journal" was absorbed by this firm, and in 1846 the name of the "Journal" was attached to their daily issue. William T. Bacon came into the firm in 1846, Mr. Woodward having died, and edited the "Morning Journal and Courier" until 1849. That paper's name had its origin

Minott Augur Osborn

John B. Carrington



MONDAY, *December* 31, 1764. [Number 6.]

The CONNECTICUT COURANT.

Containing the freshest Advices, Foreign and Domestick.

LONDON, October 8.

Extract of a Letter from Algiers, September 12.

NEAR eight hundred slaves are constantly employed here in making a back water sufficient to contain the whole Algerine navy, secure from the effects of a bombardment, and strongly flank'd with nine batteries of heavy cannon. Perhaps you may wonder how this petty state is bold enough to maintain almost constant hostilities with half the naval powers of Europe; but so long as they continue to be supplied with ammunition and warlike stores

Amongst the numberless complaints which have been brought to the bar of the public, against the present administration, I know of nothing which has been so slenderly supported, of which ought to deserve a greater share of the national attention, than the restrictions lately laid upon our American colonies.—The continuation of the land tax, and the extension of excise, are evils of a less dangerous tendency, for these can only affect us at home; whereas the restriction of our North American commerce, not only prejudices the Mother country in a material degree, but adds in a very considerable manner to the opulence of our natural enemies: In fact, Sir, the system of politics, by which our affairs is regulated, cannot but

December 31, 1764 issue of the Hartford Courant. The oldest American newspaper of continuous publication, under the original name and in the original place.

partly in the "Connecticut Journal," started in 1767, and partly in the "Morning Courier," a paper originated by Winthrop Atwell and bought by the proprietors of the "Journal and Herald." John B. Hotchkiss was the successor of Mr. Bacon in 1849, and the firm name became Carrington & Hotchkiss. The partnership ended by the retirement of Mr. Hotchkiss, when a stock company was formed with John B. Carrington as manager and the largest owner. The other stockholders were: Abner L. Train, Sereno Scranton, president of the New York and New Haven railroad; Hon. N. D. Sperry, formerly Secretary of the State of Connecticut, and at that time postmaster of New Haven, which place he held for twenty-five years; Hon. William W. Boardman, an ex-congressman, and Morris Tyler, a merchant of New Haven, who was lieutenant-governor of Connecticut in 1872-3. In 1875 Mr. Carrington bought out all the other owners and admitted his two sons, Edward T. and John B. Jr., into partnership. In February, 1881, the elder Carrington died and the paper passed into the management of his two sons. Edward T. Carrington died not long after the death of his father and the paper came into the hands of John B. Carrington, who in 1906 sold a half interest in it to Colonel Norris G. Osborn, who since then has been editor-in-chief of the paper with Amos P. Wilder for several years past as associate editor. The paper is now in the hands of the Carrington Publishing Company, of which John B. Carrington is President. Edward T. Carrington, a grandson of the first John B. Carrington, is publisher.

What is now the "Journal-Courier," that name having been adopted soon after Colonel Osborn became its editor, has played a large part in the affairs of New Haven

and Connecticut and the nation. Its record has been conspicuous for devotion to New Haven interests, for conservatism, fairness in discussion and generous and effective support of good causes. Among its editors have been William T. Bacon, John B. Carrington, Edwin A. Tucker, Charles S. Elliot, Henry R. Elliot and William G. Pratt.

In ancient days in New Haven, as in these, there were "long-felt wants" that were not appeased by the existing newspapers. One of these wants in 1812 resulted in the publication, begun December 1 in that year, of the "Columbian Register" by Joseph Barber. Mr. Barber, who had responded to this want, was an earnest Democrat and a strong supporter of President Jackson during the troubles of the old United States Bank which led to the removal of the government deposits from that institution. New Haven, then a thriving village of about 7,000 people, took kindly to the new paper, as did the surrounding villages. Among the writers in the early days of the paper was Minott A. Osborn, whom Mr. Barber took into partnership in 1834, and the partnership continued until 1838, when Mr. Barber disposed of his interest to Mr. Osborn. Mr. Osborn had for a partner William B. Baldwin, who supervised the mechanical part of the paper. The paper flourished, and in 1842 the "Register" had a daily, a semi-weekly and a weekly edition. The firm of Osborn & Baldwin was dissolved in 1866, Mr. Osborn and one of his sons managing the business. The elder Osborn died in 1877, after a career of great activity and influence. He was prominent and powerful in Democratic planning and action. Though not an office-seeker he served as Col-

lector of the Port under Presidents Pierce and Buchanan, was appointed Railroad Commissioner by Governor Ingersoll and Road Commissioner of New Haven by Mayor Lewis. He did much for New Haven. He was especially active and useful in providing it with an adequate water supply. At the time of his death he was a director in the New Haven Water Company.

After the death of the elder Osborn in 1877 the "Register" was conducted by two of his sons, one of whom, Colonel Norris G. Osborn was the editor. Daily, weekly and Sunday editions were published. John Day Jackson came into control of the paper later and Colonel Osborn remained as editor until he became interested in, and editor of, the "Journal-Courier."

In November, 1829, another of the long-felt wants inspired Charles Adams to start the "New Haven Palladium." In the latter part of 1830 James F. Babcock became editor and general manager of the paper and continued his connection with it for nearly thirty-two years. Starting with a weekly edition, in 1839 Mr. Babcock began the publication of a tri-weekly edition and February 23, 1841, the "Daily Palladium" made its first appearance. In 1862 Mr. Babcock ceased active journalistic work and Cyrus Northrop was editor for a year, retiring to accept an appointment to the Professorship of Rhetoric and English Literature in Yale College. Among the editors who followed him were A. H. Byington, Colonel William Grosvenor, Abner L. Train, Edward Butler, Herbert E. Benton and Amos P. Wilder, later U. S. Consul to Hong Kong and Shanghai. Leo R. Hammond came into control and management of the paper in its later days. It was finally "absorbed" by the Carrington Publishing Company,

breathing its last in 1911. During a large part of its career it was an able and influential Republican organ.

The "New Haven Union" was established in July, 1871, as a special friend of Labor. The compositors of the "Journal and Courier" had "struck" and Alexander Troup, a working printer in New York, came to New Haven to talk to workingmen about the rights and wrongs of labor. He and his associates started the Union, at first publishing it Sunday morning. Soon afterwards it was issued Saturday afternoon instead of Sunday morning and was named the "Saturday Evening Union." July 1, 1873, the paper became a daily and a stock company was formed which issued the paper six evenings a week and Sunday morning. Mr. Troup being able and active, became a power in politics, cutting a large figure as a labor advocate, a Greenbacker and a Democrat. His paper finally became recognized as a Democratic organ. He was Internal Revenue Collector for Rhode Island and Connecticut under President Cleveland from 1885 to 1889, Chairman of the Democratic State Committee from 1896 to 1898 and Connecticut member of the National Democratic Committee from 1896 to 1900. He was an earnest admirer and personal friend of William Jennings Bryan. He died in September, 1908, and his two sons, Philip and Alexander, succeeded to the control of the paper, which they have since ably and successfully conducted. Their mother, Mrs. Augusta Lewis Troup, continued after her husband's death to give much attention to the paper, in whose advancement and success she had from the beginning a great share.

The "New Haven Morning News" was born on the 4th of December, 1882, and was started as a thoroughly

independent paper. Reuben B. Davenport, a New York newspaper man, was the editor, and Henry Allaway, also a New York newspaper man, was his associate. The paper prospered and early in 1884 Mr. Davenport withdrew from it, selling his stock to Professors Simeon E. Baldwin and Henry W. Farnam of Yale, who wanted to encourage good government. With their advent into journalism Clarence Deming, also a well-known Yale man, and formerly of the "New York Evening Post," became editor of the "News," which continued to do good service for the public until it was finally absorbed by the Carrington Publishing Company in 1898.

The "New Haven Evening Leader," now the "Times-Leader," came into existence in 1892 in response to the demand for a paper which should be distinctively and aggressively Republican. Charles W. Pickett, who had been a reporter on the "New Haven Palladium," and a law student at Yale, was appointed editor, and he has kept the paper true to the intent of its founders and it is today as thoroughly Republican as ever. William A. Hendrick is and has been for several years the head of the business management of the paper.

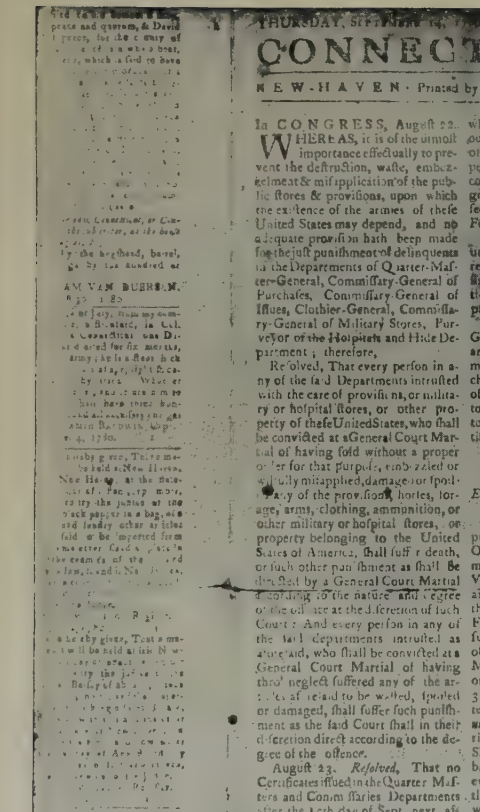
Two Italian papers are published in New Haven, both weekly. One is the "Corriere Del Connecticut," and the other "La Parola Cattolica."

The "New England Farms" is a weekly publication with its headquarters in New Haven.

Of course Yale has contributed conspicuously to "Journalism" in New Haven, and also to "literature." Many publications with the Yale brand on them have lived and died and others are surviving. Still alive are "The Yale Daily News," The "Yale Alumni

Weekly," the "Yale Sheffield Monthly," the "Yale University Record," the "Yale Review" (quarterly), the "Yale University Divinity Quarterly," the "Yale University Law Journal" (monthly), the "Yale Literary Magazine."

Among journals lasting but a short time were: "New Haven Gazette," a weekly, which was born in May, 1784, and lived nearly two years; the "American Musical Magazine," a monthly, which began in 1788 and lived through ten numbers; another "New Haven Gazette," a weekly, begun January 5, 1790, and ended June 29, 1791; the "Federal Gazetteer," a weekly, begun in February, 1796, and ended August 9, 1802; the "Messenger," a weekly, begun January 1, 1800, and ended August 9, 1802; the "Sun of Liberty," begun in 1800 and soon ceased to shine; the "Visitor," a weekly, begun October 30, 1802, and ceased its visits in November, 1804; the "Churchman," a monthly, began in January, 1804, and lived through four volumes; the "Literary Cabinet," begun November 15, 1806, ended October 31, 1807; "Belles Lettres Repository," begun and ended in 1808; "Memoirs of the Connecticut Academy of Arts and Sciences," begun in 1810, ended in 1813; the "Atheneum," begun in February, 1814, ended in August, 1814; "Religious Intelligencer," begun in June 1, 1816, ended soon after; the "Guardian," a monthly, begun in 1818, ended in 1828; the "Christian Spectator," a monthly, begun in January, 1819, ended in its first form in 1829, but continued as a quarterly for a while; the "Microscope," a semi-weekly, begun in March, 1820, and ended in September, 1820; the "National Pilot," begun in October, 1821, ended in 1824; "United States Law Journal and Civilians' Maga-



THURSDAY, SEPTEMBER 14, 1780. [NUMB. 673.]

CONNECTICUT JOURNAL.

NEW-HAVEN: Printed by THOMAS and SAMUEL GREEN, near the College.

IN CONGRESS, August 22.

WHEREAS, it is of the utmoft importance effectually to prevent the deftruction, waſte, embezzlement & miſapplication of the public ſtores & proviſions, upon which the exiſtence of the armies of theſe United States may depend, and no adequate proviſion hath been made for the juſt puniſhment of delinquents in the Departments of Quarter-Maſter-General, Commiſſary-General of Purchaſes, Commiſſary-General of Iſſues, Clothier-General, Commiſſary-General of Military Stores, Purveyor of the Hoſpitals and Hide Department; therefore,

Reſolved, That every perſon in any of the ſaid Departments intruſted with the care of proviſions, or military or hoſpital ſtores, or other property of theſe United States, who ſhall be convicted at a General Court Martial of having ſold without a proper order for that purpoſe, embezzled or wilfully miſapplied, damaged or ſpoiled any of the proviſions, horſes, forage, arms, clothing, ammunition, or other military or hoſpital ſtores, or property belonging to the United States of America, ſhall ſuffer death, or ſuch other puniſhment as ſhall be inflicted by a General Court Martial according to the nature and degree of the offence at the diſcretion of ſuch Court: And every perſon in any of the ſaid Departments intruſted as aforeſaid, who ſhall be convicted at a General Court Martial of having thro' neglect ſuffered any of the articles aforeſaid to be waſted, ſpoiled or damaged, ſhall ſuffer ſuch puniſhment as the ſaid Court ſhall in their diſcretion direct according to the degree of the offence.

Auguſt 23. *Reſolved*, That no Certificates iſſued in the Quarter Maſters and Commiſſaries Departments after the 15th day of Sept. next, ſhall be deemed to be upon the United States, unleſs iſſued under the following regulations.

Firſt. That they be for ſervices performed or articles purchaſed, within the reſpective Departments.

Secondly. The Quarter-Maſter-General and Commiſſary-General ſhall themſelves ſign all ſuch certificates as are iſſued in their reſpective Departments.

Thirdly. All ſuch Certificates ſhall be given for ſpecie, or other current money equivalent.

Fourthly. All contracts or purchaſes made, for which certificates ſhall be given, ſhall be made for ſpecie value.

Fifthly. The articles ſo purchaſed, ſhall be enumerated in ſuch Certificates, with the rates & prices thereof, and the prices ſhall be reaſonable when the preſent circumſtances of our affairs are compared with the coſt of articles of like Quality, or ſervices performed in the year 1779, or when compared with the allowance by Congreſs to the United States as expreſſed in their reſolution of the 25th of February laſt.

Reſolved, That Certificates iſſued under & agreeably to the foregoing regulations, ſhall bear an intereſt of ſix per cent. per annum from the time ſtipulated for payment until paid.

Reſolved, That the Quarter-Maſter General, and Commiſſary General be, and hereby are ſtrictly enjoined, to make monthly returns of their purchaſes and proceedings to the Board of War, and make monthly returns, to wit, on the laſt day of every month to the Board of Treaſury, of all Certificates ſo iſſued as aforeſaid.

Extract from the minutes,
CHARLES THOMSON, Secty.

BOSTON, Sept. 4.

Extract of a Letter from St. Euſtatia, May 3.

"The 10th inſtant we were ſurprized with the moſt remarkable Outrage perhaps that was ever committed by a licenſed Offender—Six Virginia Veſſels (two Snows, two Brigs and two Schooners) were chaſed into the very Road of St. Martin's, by two Frigates and a Sloop.—The two Purſuers anchored near them for the Day of their Arrival, and the ſucceeding Morning departed.—The 9th (three or four Days after) one 40 Gun Ship, 3 Frigates, and a Sloop of War, entered the Harbour, and *ſans Ceremonie*, took Poſſeſſion of the ſix Americans.—They alſo ſent a Barge on Shore to poſſeſs themſelves of the Tobacco that had been landed. However on the Appearance of two Gentlemen—Claimants—(theſe were Men who had purchaſed the Cargoes of the Veſſels) their Pretentions became void—and tho' they had Power in their Hands, they did not carry the Tobacco off.—Some charg'd this indulgence to the Purchaſers being better Engliſhmen than Burghers.

"Admiral Rodney, with his Fleet, conſiſting of 14 Sail of the Line, &c. ſail'd from St. Kitts for St. Lucia on the 12th, where he will remain during the Hurricane Months."

FISHKILL, September 7.

Extract of a letter from an officer, dated Engliſh Neighbourhood, Auguſt 30, 1780.

"On the 24th, the light camp, which you know is commanded by Major-General the Marquis de la Fayette, took up its line of march from the place of encampment in the vicinity of Fort Lee, and moved on the road to Bergen. We arrived near the town about one o'clock at night, where we halted, and fixed our pickets and patroles, Col. Stewart, with his regiment, took poſt within about muſket ſhot of Paulus-Hook, the place where your friend Lee ſo very deſervedly gained ſuch reputation. Although I have been on this ground before, I was not till then ſufficiently ſenſible of the multitude of difficulties which muſt have been oppoſed to his ſucceſs.

"In the morning, the light camp took a poſition on the high ground between Bergen-Town and Paulus-Hook. The city, the ſhipping, Long-Iſland and the harbour lay expoſed to our view. The troops in New-York, of courſe, had an opportunity of ſeeing us, and I make no doubt felt themſelves injured by our near approach.

"All this day the infantry were employed in foraging as low as the Kills. The enemy fired a number of ſhot upon thoſe on Bergen-Neck from Staten-Iſland, but they were too ineffectual either to diſturb the waggoners, who were loading with grain, or to drive off any of the foragers.

"I cannot ſay what is the amount of cattle and dry forage collected; but certificates were given to the people that they might have as little room as poſſible for complaint: Theſe will procure them compenſation at ſome future day; and in the mean time, they ſhould conſider, that they have contributed heretofore, very little to the ſupport of the war; and that what was taken for the uſe of this army and to prevent its becoming a ſource of ſubſiſtence to the enemy, does not amount to the value of their taxes. In this light we have only aſſeſſed them to liquidate a tax, cheerfully paid by their fellow citizens, and which they could have paid in no other manner, owing to their ſituation.

"But a buſineſs of this kind is ſeldom unattended with more or leſs injury to the houſhold property of the inhabitants. The ſoldiers will find occaſion to pilfer however watched by the officer. It is impoſſible to exclude every practice of this nature. All the officer can do in this caſe, is to puniſh the offender when diſcovered, and reſtore the goods. This was done in every inſtance; and one of the ſoldiers hanged on the ſpot.

"The light camp in this movement were ſupported by the Pennſylvania line; it commanded the paſſage at Hoebuck: The Jerſey brigade, Bull's Ferry; and the York

September 14, 1780 Issue of the New Haven Journal Courier, Established 1766, Oldest Daily in the State. Seventh Oldest in the Country.

zine," begun in June, 1822, and ended in 1828; "American Eagle," begun its fight in 1826, and that was about all; "New Haven Chronicle," a weekly, begun in February, 1827, ended in June, 1832; "New Haven Advertiser," a semi-weekly, begun in May, 1829, ended in October, 1832; the "Sitting Room," begun in 1830, and ended soon; "New Haven City Gazette," a weekly, begun in April, 1830, and ended in May, 1831; the "Little Gentleman," begun in January, 1831, and ended in April, 1831; "National Republican," begun in June, 1831, ended in March, 1832; the "Boy's Saturday Journal," begun in December, 1831, and ended in February, 1832; the "Literary Tablet," semi-monthly, begun in March, 1832, ended in March, 1834; the "Sabbath School Record," monthly, begun in January, 1832, ended in December, 1833; the "Child's Cabinet," a monthly, begun in April, 1832, and ended soon; the "Watch-tower of Freedom," begun in October 1832, and ended soon; the "Weekly Conductor," begun in March and ended in June, 1833; "Journal of Freedom," a weekly, begun in May, 1834, and lasted about a year; "Jeffersonian Democrat," a weekly, which lasted six weeks, beginning June 7, 1834; the "Microcosm or the Little World of Home," a monthly, begun in July, 1834, ended soon; the "Perfectionist," a monthly, begun in August, 1834, ended in March, 1836; "Literary Emporium," begun in June, 1835, and ended soon; "Religious Intelligencer and New Haven Journal," begun in January, 1836, and ended soon; the "American Historical Magazine and Literary Record," monthly, begun in January, 1836, ended soon; "Chronicle of the Church," begun in January, 1837, ended soon. The "New Havener" was in existence in 1837. The "New Haven Democrat" was

begun in April, 1845, and continued until April, 1847, when it ceased publication because so many of the subscribers failed to pay. The "Daily Lever," started by R. W. Wright and Edwin A. Tucker, became the "Elm City Press," and in a few short years became a cold newspaper corpse. The "Observer," a weekly, and for a little while a daily, observed a while and then ceased observing. The "Sunday Times" was started by Henry W. Vail, but did not long disturb or add to New Haven's Sunday calm. And there were others including "Nutmeg Gratings" which contributed their mites to "progress" and are now in the graveyard. Among them were some German papers, which were quite influential in their brief day, New Haven having many Germans among its inhabitants.

Newspapers of Waterbury

For 158 years after its incorporation Waterbury, which had become a town of 3,000 people, had no newspaper of its own. Even when, on December 14, 1844, Joseph Giles issued the first number of the "Waterbury American," he said the obvious thing that his "experiment was a new one," by which he meant, perhaps, that it was a dubious one. He had some justification, however, for there had been other attempts which had not got so far as to make newspaper history, but had cost the experimenters some money. He seems to have succeeded, however, because he had the foresight to ensure support by publishing a newspaper for the towns of Naugatuck, Wolcott, Middlebury, Watertown and Plymouth as well as Waterbury. He was publishing, however, the type of newspaper common at the time, of four pages, with foreign, general and political news.

The conception of local news had not at that time dawned. Nevertheless, the publisher called it a "family newspaper," and recorded at the start a pledge of independence in political affiliation which has been admirably kept, from that day to this.

After seven weeks of going it alone, Mr. Giles, feeling the need of help, formed a partnership with the man who, in thirty years of association and control, really made the "American," and gave it its characteristic and unique position in Connecticut journalism. Edward Bronson Cooke, who in his time became lovingly known to his associates in the newspaper fraternity as "Father Cooke," was a native of Waterbury, grown up from the printer's case to newspaper editing and management, a man of masterly ability, a leader in his community. He set for the "American" a literary style. He was able also to build for it a business prosperity which gave it for many years the leadership in the publications of Waterbury.

Mr. Giles remained with the paper only until 1846, selling his interest to Joseph Hurlburt, and the firm became E. B. Cooke & Company. In 1850, through progressive management and enlargement, the "American" had become an established and prosperous newspaper, outranked in size by only three in the state. In 1856 George L. Townsend came into the firm, and with Isaac A. Mattoon, who in 1851 had purchased an interest, conducted the business end of the paper, Mr. Cooke being editor-in-chief. The American Printing Company, under which name the business was carried on until 1922, was organized in 1868.

Enlarged again in 1860, dressed in new type, the "American" reiterated its purposes of independence and

idealism, and went forward to new success, which required another enlargement in 1866. But that same year another change was necessary. Waterbury had become a city thirteen years earlier, and had now reached about 12,000 in population. So the first issue of the daily "American" was made on May 22, 1866. It was a modest four-page paper, actually smaller in size than the first issue of the weekly in 1844, and the publishers were appropriately conscious of the risk they were undertaking. But they had responded to what they believed a public demand, and they were courageous.

But Mr. Cooke, the genius of the publication, was then seventy-one years old, and feeling the need of laying down some burdens. In the course of the next few years, two of the partners who had entered the firm in its first decade died, and Mr. Cooke's son, George W. Cooke, took up some of his father's duties. But the organization of the American Printing Company in 1868 brought an influx of capital and some new blood to the conduct of the paper. By that time the daily had passed beyond being a doubtful venture. It had been necessary for Mr. Cooke to relinquish the editorial burdens, and among those who followed him were James M. Woodward, M. L. Scudder, Jr., and Reuben H. Smith. The Rev. Dr. Joseph Anderson, pastor of the First Congregational church, though never openly appearing as editor, was a contributor of most of the editorials in 1872 and 1873, and always treasured his newspaper service as among his choicest experiences.

The death of "Father Cooke," who had long been called "the Nestor of Connecticut journalism," removed a man who had for over thirty years been actively connected with the paper, who was recognized as its

founder, and who had made it one of the most distinguished newspapers of Connecticut. It occurred on January 17, 1875, in his eighty-second year. Following it, J. W. Smith was elected president of the company. Two years later a significant group of stockholders came into the company, including H. S. Chase and Charles F. Chapin. In the reorganization of 1877 these, together with A. S. Chase, the only survivor of the original group, C. R. Baldwin, Charles F. Pope and Charles F. Treadway, became the owners of the newspaper. A. S. Chase was the financial leader, with abundant faith in the future of the "American," and he was elected president. He remained the president and inspiration of the company until his death in 1896. H. S. Chase, his son, who entered the company of stockholders in 1877, became treasurer and manager of the company, and relieved his father of many of the burdens in his later years.

Charles F. Chapin came to the "American" in 1877 fresh from graduation at Yale, and after studying the making of a newspaper in counting room and composing room and pressroom for a year, became editor of the paper. He has held that position continuously since, and under radically changed ownership and conditions, still held it in 1924. Arthur Reed Kimball, son-in-law of Augustus S. Chase, after graduation from Yale in 1877, a year at the study of law and a somewhat varied newspaper experience, came to the "American" in 1881 as associate editor. About 1913 he became business manager, and remained until the sale of the paper by the Chase interests.

This occurred on February 8, 1922, when it was announced that the "American," after some forty-five

years under virtually the same ownership, had been sold to Russell S. Whitman of New York. A little more than a month later it was announced that the ownership of the "American," evening, and the ownership of the "Republican," morning newspaper, were the same. Later in the year the business of the "Republican" was moved to the "American" building, and still later in 1922 the "American-Republican" incorporation was formed for publishing the two newspapers.

In the period between 1844 and 1881 a number of publications began, had their day and ceased to be in Waterbury. The next to establish for itself a permanent place was the "Waterbury Democrat," as it has been generally known. It was founded in 1881 as the "Valley Democrat," weekly, by Cornelius Maloney and Cornelius Loughery, who had been running a printing office in New Britain, and had published there the "New Britain Times." It was at first published on Saturdays, and so continued, steadily growing in support from those of Democratic faith, until January, 1886, when it changed its publication day, and called itself the "Sunday Democrat." Two years later, having installed a new press, the firm started, December 5, 1887, the "Evening Democrat," under which title it is still published.

Meanwhile, Cornelius Loughery, who early retired from the firm, had been succeeded by Cornelius Maloney's brother Michael T., who was the editor, and the firm was C. & M. T. Maloney. Michael T. Maloney died in 1896, but Cornelius Maloney carried on the business under the same name until his own death in 1914. Then the "Waterbury Democrat, Inc.," was formed, with E. Vincent Maloney as president and treasurer, and still

publishes the newspaper. With many people in Waterbury the "Democrat" is identified with Martin Scully, who as reporter for many years gained so greatly the acquaintance and respect of the people of Waterbury that he was elected mayor for two terms, in 1913 and again in 1915, serving the city for four years. He is now city editor of the "Democrat."

John Henry Morrow, formerly a Brooklyn, N. Y., newspaper man of some importance, had in April, 1881 established in Waterbury a weekly he named the "Independent." He conducted it only three months. On October 29 of that year he issued the first number of the "Waterbury Republican," weekly. It was "earnestly to maintain the principles on which the Republican Party was formed." On January 2, 1884, a daily edition was started, with which the weekly edition was continued until 1897. The "Republican" was an evening paper until November 4, 1886, since when it has been a morning daily.

The newspaper had the familiar financial struggles of that period of Connecticut publication. In an evening paper city, with two rival papers well established, the new daily had hard sledding. In 1888 Mr. Morrow organized a joint stock corporation which took over the paper. Associated in it with him were David S. Plume, who was president, George E. Terry, Edward L. Bronson and Daniel F. Webster. With new capital the "Republican" was enabled to improve its equipment and facilities.

But the business men whom Mr. Morrow had associated with him were accustomed to better returns on their capital than a morning newspaper gave in Waterbury at that time. "In August, 1889," says the Anderson

"History of Waterbury," "the Republican Printing Company retired from the proprietorship." It was the understanding in Waterbury that then or soon after that the proprietorship, which must have gone to somebody, was acquired by the American Printing Company. Waterbury directories between that date and 1900 revealed no ownership of the paper. Francis Atwater of Meriden acquired it in 1900. J. H. Morrow, who remained for nearly a year after the sale by the Republican Printing Company, was succeeded in March, 1890, by Thomas Dudley Wells, who had held a position on the paper in the previous year, and who now returned as editor. He remained in that position for ten years, going to Hartford in 1900 to be associate editor of the "Hartford Post."

Francis Atwater retained the "Republican" less than a year. In 1901 William J. Pape, a newspaper man of Passaic, New Jersey, and William M. Lathrop, who had been in newspaper work in Carbondale, Pennsylvania, came to Waterbury and purchased the "Republican." They formed in 1902 the Waterbury Republican, Inc. Installing the publication in a new plant, with Mr. Lathrop as editor and Mr. Pape as business manager, they gradually brought it up toward prosperity, so that in 1910 Mr. Pape was able to purchase the whole business from his partner, whose health seemed failing. Enlisting more Waterbury capital, Mr. Pape was able to enlarge and expand the paper and its plant, until he achieved the coup which in 1922 brought the "Republican" and "American" under one ownership. A Sunday edition of the "Republican" had been started in 1899, but was discontinued. Mr. Pape revived it in 1907 and has continued it ever since.

In all the years since newspapers began to be published in Waterbury, the community has seen a rapid succession of papers which have risen, flourished more or less for a time, and then vanished away. Some have been political, some literary, many serving special interests. Few of them remain, there being, besides those mentioned, only one newspaper in English published in Waterbury in 1924. That is the "Sunday Tribune," established in 1919. Some of the long procession that has passed are mentioned here in their order.

It began in 1856, when the "Flag of Our Union" started to wave for Millard Fillmore, candidate of the Know Nothing party for president in that year. John Kendrick was back of it. It merely lasted out the campaign. The same year the "Waterbury Journal" was started to boom John C. Freemont as a presidential candidate, and Robert W. Wright was its editor. Mr. Wright left it after about a year. Edward Tucker took it over, and changed its name to "The Semi-Weekly Democrat," which suspended in the fall of 1858 for lack of funds.

Some Republicans of Waterbury who felt that the "American" was not sufficiently partisan backed Monroe & Miller in 1865 to start the "Daily Chronicle." It was a financial failure, and lasted only a few months, but it had this effect: It suggested to E. B. Cooke & Company, publishers of the "Weekly American," that the right sort of a daily would go in Waterbury. They acquired the material of Monroe & Miller, and started the publication, in 1866, of the daily "American."

Josiah Giles, founder of the "American," had established a printing office in 1858, and had bought at auction the material of the departed "Semi-Weekly

Democrat." In 1860 he started the "Naugatuck Valley Messenger," under the firm name of J. C. Coon & Company, Mr. Coon, who had lately come from Michigan, being editor. He soon retired, and Josiah Giles & Son carried on the paper until fire destroyed the building they occupied, when they suspended the paper after only a year of continuance.

The "Valley Index," a weekly published by George W. Cooke, Isaac A. Mattoon and Orrin A. Robbins, was started on June 18, 1869. It flourished fairly well but was sold after three years to Eben Winton, who changed its politics from Republican to Democratic. It went through frequent changes in the next few years. L. H. Porter was the final owner, the name having been changed to the "Waterbury Index," and he published the final number in March, 1880. He issued a new paper, the "Waterbury Monitor," in the following month. In November, J. Henry Morrow, who has previously appeared in connection with the "Waterbury Republican," bought the paper, discontinued it and brought out the "Independent." Out of that grew the beginning of the "Republican."

The "Weekly Examiner" began its career in Hartford in 1881, and for three years was continued under the announced plan of having a central office there, with editions for various cities in Connecticut and beyond. In 1884 it first appeared in Waterbury, and was continued there till its suspension in 1908. M. J. Brzezinski, native of Poland, genius and radical, was its guiding force. He made it a labor organ, but its pungent shafts were driven at any target which pleased its forceful editor.

The "Brooklyn Observer" was begun on May 15, 1886

by Henry W. H. Satchwell, formerly foreman of the "American's" mechanical department. It was well supported, but Mr. Satchwell for several reasons, chief of which was failing health, suspended it a year and a half later.

The "Sunday Herald" was for a time in the early part of its career—from 1888—rated a Waterbury paper, and for several years an edition was published there. But since 1891 it has been a Bridgeport publication, though largely circulated in Waterbury.

There is a considerable list of ephemeral publications, many of them long since forgotten. The "Saturday Gazette" was started by Frank Wheeler in 1888, and discontinued after two numbers. William H. Jackson started "Town Talk" in 1892, and it ceased after a few weeks. The "Sunday Globe," established by Christopher F. Downey, one of the brilliant Waterbury newspaper men of his period, had a longer continuance. It began as a Sunday issue in 1893, and continued thus till 1899. In that year Mr. Downey began an evening edition, which continued for two years. Then the paper disappeared altogether. Some of the others were: "The Valley Catholic," 1890 to 1895; "Sunday Telegram," which appeared after the demise of the "Globe" and continued for three years, to 1906; "The Telegraph," in 1911 and 1912; and the "Sunday Mail," 1916 and 1917.

There is a long miscellaneous list, mostly of papers which represented special or trade interests, or church or amateur papers. There were five or six trade papers or house organs; some seven church papers; and no less than thirty amateur papers which expressed mostly the ideas of youth. There is also the usual number of school papers, some of them of excellent quality.

Newspapers of Meriden

The Meriden newspaper period began in the years when the literary rather overbalanced the news idea in publication. The first traceable product was edited by an "association of gentlemen," who called it the "Northern Literary Messenger." It was published by O. G. Wilson, and the first number appeared in September, 1844. It was "devoted to literature and the arts." The only local news it carried was in the advertisements. Its duration was about five years. O. G. Wilson and George W. Weeks immediately started the "Meriden Weekly Mercury," and in their first issue, which was on March 24, 1849, they showed some unseemly glee at the demise of its predecessor. The "Mercury," however, seems to have been a continuation of the "Messenger." It received a setback from fire six weeks after it was started, and the publishers had to move their plant. It did not continue for many years, but the record of the date of its death apparently was lost.

The next phase of Meriden journalism is notable in that it presents Orville H. Platt, who was chiefly known to the state as United States senator, as an editor. He edited the "Connecticut Organ," a weekly which Franklin E. Hinman printed in 1851. Mr. Hinman sold the next year to James N. Phelps & Company, who seem to have added the title "New Britain Journal" to the paper. It is not certain whether the "Connecticut Whig" succeeded this, but in 1852 we find the "Whig" published by R. W. Lewis and O. H. Platt, with Mr. Platt as the editor. George W. Rogers was also associated with Mr. Platt. The paper was discontinued in 1854.

About the same time was begun the "Meriden Tran-

script," published by Lysander R. Webb & Company. Of this Mr. Platt was also editor after the "Whig" suspended. The "Transcript" was begun in 1850 and ended in 1856. Mr. Platt's law business by that time had increased so that his newspaper career ended.

Robert Winton, who had stopped for a time on his way down from his home in Canada for newspaper work at North Adams, Mass., early in 1856 started the "Meriden Chronicle," and continued it three years. It was purchased then by a Mr. Stillman, who reconstructed it into the "Banner," under which name it lasted three weeks.

There seems to have been a hiatus of four years. Then, on August 29, 1863, Luther G. Riggs launched the "Meriden Literary Recorder." Of him George Munson Curtis, in his relation, says that he "had talent but lacked balance, and his course here was a stormy one, and the controversaries he engaged in brought him only great adversity and more than one personal chastisement."

The incorporation of Meriden as a city in 1867 inevitably suggested the establishment of a daily. Monroe Eaton had started the "Weekly Visitor" on March 21, 1867, and at the beginning of the following year he established a daily edition. On March 16 following it was merged in the "Weekly and Daily Republican," a paper which had a short time previously been started by Marcus L. Delevan and George Gibbons, with which later was associated William F. Graham. For over thirty years the daily continued as the "Republican," morning, until on March 1, 1899 it was consolidated with the "Morning Record," and since then has been published under the name, first of the "Record and Republi-

can," and latterly of the "Morning Record." Thomas H. Warnock was editor-in-chief of the paper at the time of the consolidation, and still remains as secretary of the company.

The other one of the Meriden papers surviving in 1924, the "Meriden Journal," was founded on March 4, 1886, when the Journal Publishing Company was incorporated. As an evening daily the "Journal" has been published ever since, and with increasing prosperity. The original officers of the company were Francis Atwater, president; Thomas L. Reilly, secretary; Frank E. Sands, treasurer. Lewis Allen was editor then and up to his death in 1914. Francis Atwater retired from the firm after 1912. Thomas L. Reilly was actively engaged with the publication most of the time up to his election to Congress in 1910. Frank E. Sands, now president of the company, has been for several years the head of the publication.

For a short time after 1881 there was an evening newspaper, originating from the "Recorder," which was variously called the "Evening Recorder" and the "Newsboy." The "Daily News" ran for a time in 1881 and 1882, and for a while published a Sunday edition. The "Penny Press" was established in 1881, and next year was called the "Evening Press." It passed out the same year. The name "Press" was revived in 1892, but only for a year. The former "Press" was consolidated with Riggs' "Daily and Weekly Recorder," and called the "Meriden Press-Recorder." It ceased in 1884. William F. Graham published the "Evening Monitor" in 1872, but it was merged with the "Republican." There was published in 1881 and 1882 a "Morning Call." Some of the scattering ones were the "State Temper-

ance Journal," 1867 to 1876; the "American Sportsman," 1871 to 1875; the "Meriden Herald," 1876 and 1877; and "Novelty," 1894 and 1895.

The latest newspaper to be established in Meriden was the "Evening Times," started in May, 1905, by Henry C. L. Otto. It was well received and promised well, but the death of Mr. Otto only six months after it was started early ended its career.

Newspapers of Ansonia

The beginning of the "Evening Sentinel" was as a weekly publication in 1871. Jerome and Carpenter were the founders, and the first issue appeared on November 11. The publication bore the name of the "Naugatuck Valley Sentinel," and continued to January 1, 1884. It was a four-page folio of eight columns, very neatly printed, Mr. Carpenter being an excellent printer. He remained in the firm less than two years, after which the paper was published by the Rev. Edward M. Jerome, the senior member, until bought by James M. Emerson, of Wilmington, Delaware, who took possession on August 24, 1876.

The publication was continued as a weekly until January 1, 1884, when the "Evening Sentinel" was started and was issued five days each week, the "Naugatuck Valley Sentinel" appearing on Wednesdays, thus completing the daily publication. Without this economic feature it is doubtful if the new enterprise could have succeeded. As it was, the daily was floated by the weekly until the former became self-sustaining, and a few years later the weekly was discontinued.

As a prelude to the "Evening Sentinel," and to test the demand for it, the experiment of a daily paper in

Ansonia was tried for a month in December preceding January 1, 1884. The success then achieved determined the permanency of the effort. When the daily first appeared it was a six-column folio, afterwards attaining to eight columns to the page, finally changing to the quarto form, which it has continued, the number of pages varying from eight to twenty-four as news and business requirements demanded. From 1878 to April 1, 1907, the "Sentinel" was operated as an individual enterprise, being on the latter date incorporated, several of those who were making it becoming stockholders. No new capital was admitted or required.

The stockholders were J. M. Emerson, Howard F. Emerson, J. Ralph Emerson, Frank N. Burr, Charles C. Jump and W. M. Fernald. Mr. Burr died after a few years, and Mr. Jump and Mr. Fernald retiring, the stock reverted to the Emerson family.

As the paper grew in importance, new and improved machinery was demanded. In the latter part of 1924 the equipment consisted of nine Mergenthaler linotype machines and a 24-page Hoe rotary press, with full stereotype outfit. For many years the "Sentinel" has held an Associated Press franchise, with telegraph wire and operator in its editorial rooms.

On January 1, 1922, J. M. Emerson retired from active connection with the "Sentinel" after thirty-eight years of service. A new company was formed on that date, styled "Emerson Bros., Inc.," comprising Mr. Emerson's two sons, who have since conducted the destinies of the paper.

The "Sentinel" was the first and only newspaper to exist in Ansonia. Back in the 'forties Thomas M. Newsom had tried the experiment of a daily paper in Derby,

but it was short-lived. The "Derby Transcript" had preceded the "Naugatuck Valley Sentinel" in the field, the Rev. W. T. Bacon being its editor. Various attempts were made by the original owners of the "Transcript" and by at least six or eight other persons to build a daily publication on that newspaper, but all failed, and the "Transcript" itself finally disappeared from the newspaper field. During this period several efforts were made to establish both daily and weekly papers in Ansonia, but none was able to succeed. There were morning papers and evening papers, one-cent papers and two-cent papers, but none ever achieved a basis of permanency.

For the last twelve or fifteen years the "Evening Sentinel" has held undisputed possession of its field, conferring upon its patrons all the benefits that could accrue from two or more publications in the territory, and it is to the knowledge of this fact among business men that the success of the enterprise is chiefly due.

Other County Newspapers

Ten other towns of the county have newspapers or traces of them. Branford's first number was the "Weekly Gleaner," published from 1878 to some time in the following year by Philo Hall and others. It was merged in 1879 with the "Shore Line Times," then published in Fair Haven, but later in Guilford. There is a trace of a "Branford News" published in 1878, probably by Willis Hopson. The "Branford Opinion" was the most nearly permanent of any strictly Branford paper. It was established in 1891 and continued to 1915. It had several publishers at different times, among them

Frederick A. Finch, Elias P. Bates and Fred. J. Windisch.

The "East Haven Press," a weekly started in 1921 by Paul H. Stevens, and the only East Haven newspaper of which there is any record, published up to 1924 an edition for Branford which it called the "Branford Standard."

Publication in Guilford was unofficially inaugurated by the "Clionian Banner," a publication in the late 'sixties by a Guilford literary society of that name. It was never listed and was of short duration. W. T. Hendrick made the first commercial venture in publication when he issued the "Shore Line Sentinel" on March 8, 1877. It was a good weekly, independent in politics, and at that time the only paper published on the shore line between New Haven and New London. But it survived only four years. The "Shore Line Times" was established as a weekly in Clinton in 1877 and was later removed to Fair Haven, where it was published by the Rev. E. M. Jerome. It gained considerable acceptance in Guilford because of its excellent correspondence from that town, and in November, 1895, was purchased by Charles H. Scholey, who removed it to Guilford. For over twenty-five years he conducted it with rare judgment as a high class weekly, serving ably the local news needs of Guilford and the other towns of Southeastern New Haven and Southwestern Middlesex county. In 1922 he sold it to Mrs. Vernon E. Buell and Miss Mabel F. Putney, who had for years been associated with him in the conduct of the paper, and who have continued it with increasing success.

The "Guilford Echo" was started in August of 1891 by F. W. Babcock of Lyme. It was removed to Bran-

ford in 1892, and for a time published in the plant of F. A. Finch, who was publishing the "Branford Opinion." Frederic Calvin Norton, who had long been its correspondent from Guilford, was its editor from 1892 to 1897. Its connection with Guilford for a considerable part of its existence seems to have been largely its name. That ceased in 1907. There was a "house organ" called the "Guilford Item" in the late Eighties, but it was never listed or admitted as second class mail matter.

There was from 1894 to 1904 a "Westville Times" which published an edition for Hamden and Highwood. Otherwise, this town is served by the "Cheshire-Hamden Times," published by the "Southington News" for Cheshire, West Cheshire and Hamden. There was also from 1877 to 1879 a "Cheshire Courier."

The first newspaper to hail from Milford was the "Milford Telegram," which George H. Carpenter began in January, 1873. As the "Telegram" it lasted only two years, but was continued several years longer as the "Milford Sentinel," of which C. D. Page was editor in 1876. Its support was slight, and it was discontinued shortly afterward. Traces of the "Milford Star," published in the years 1885 and 1886, are hard to find. The "Milford Citizen" was established in 1894, and has been Milford's only continuing newspaper. Edwin H. Abrams was its proprietor up to 1900, and in 1897 John F. C. Davis was its editor. It was later purchased by F. I. Hammond, who in 1916 sold it to Frederick W. Lyon of Greenwich, previously publisher of the "Greenwich News." Mr. Lyon has conducted the "Citizen" successfully since. Michael J. Goode started the "Times" in Milford in 1914, and ran it for three years.

In 1918 H. F. Oldack published the "Milford Topics," but it also was discontinued in 1920.

The earliest newspaper to be established in Naugatuck was the "Enterprise," weekly, founded on November 9, 1877, by Burton A. Peck, and continued by him as a local newspaper ever since. The second publication to appear was the "Naugatuck Review," in 1879. J. H. Beale was editor and proprietor. In December, 1885, he sold to the Naugatuck Printing & Publishing Company, whose stockholders were L. D. Warner, A. H. Dayton, E. A. Dorlan and William W. Works. In April, 1889, the "Review" was consolidated with the "Agitator," a workingman's paper which had been established in 1886, with D. W. White as editor. White and J. W. Gunn were proprietors of the "Agitator" up to 1888, and the following year, on consolidation with the "Review," White sold his interest to E. R. Clyma, and the latter became sole proprietor. The name of the paper then became the "Naugatuck Citizen," and was conducted by Clyma as a weekly labor and independent journal up to 1895. That year he made it a daily, but stronger competition killed it late in 1896. In 1895 the "Naugatuck News" was established as a daily, by a stock company of which William T. Rodenbach was president. The daily has since continued under the same ownership, Mr. Rodenbach being still president. Since 1897 Edward J. Ahern, before that postmaster of Naugtauck, has been manager. From 1908 to 1911 a Sunday newspaper known as the "Times" was published in Naugatuck.

Seymour in its seventy-five years as a distinct town has had virtually only one newspaper, the "Seymour Record," with which always will be identified the name

of William Carvosso Sharpe, who was its founder and only publisher, for almost forty-five years, and was the dean of the weekly press of Connecticut. He established the "Record" in 1879, and published it as a weekly, with only a brief interruption in 1922, when the conduct of the paper was in other hands, until he sold it in January of 1924 to Charles R. Baker, who came to Seymour from South Norwalk, and has since continued the paper. Mr. Sharpe, who in his early life was for ten years a teacher, was a historian of note, writing in particular several volumes on Seymour history. Accuracy requires mention of the fact that there was a "Seymour Times," published from 1885 to 1888 by J. H. Whiting, but the field was found to be sufficiently covered by the established newspaper.

Wallingford had nine or ten publication attempts, including two daily undertakings, but the proximity of two cities has provided the town with newspapers so sufficiently that none of them survives, though Wallingford has nearly 13,000 people. Disregarding the "Circular," a weekly organ of the Oneida Community people issued from the Mount Tom printing house in the years 1864 to 1868, the first newspaper published in the town was the "Wallingford Witness," established by W. Burgess in March, 1886, and sold by him in June of the same year to J. E. Beale, who conducted it for three years. Meanwhile the "Wallingford Times" had been started in 1886 as both a daily and weekly. It purchased the "Witness" from Mr. Beale in 1889, and discontinued it. The "Times" weekly, of which Colonel D. C. Pavey was the editor and first the Times Publishing Company and then Richards and Buck the proprietors, continued until 1891. The daily lasted only a year longer. Frederick

W. Richards succeeded Colonel Pavey as editor in the later years of the paper. There was another "Times," possibly in a sense a revival, published as a weekly from 1896 to 1898. Other earlier papers of brief duration were the "Epitomist and Literary Journal" in 1875, and the "Forum," possibly a successor to this, which lasted for seven years from 1877. There was also a Hungarian semi-weekly, "Ebreszto," from 1916 to 1922.

New London County

As in Hartford and New Haven, so in New London county, the earliest printing was by the Green family. In the "New London Day" of June 15, 1906, Richard B. Wall of that city presented an illuminating article on "The Greens in New London" from which these extracts are taken:

> Timothy Green, son of Deacon Timothy and brother of Samuel of the second generation in New London, founded the "New London Summary," a small weekly half-sheet, August 8, 1758, which was continued five years and two months. A small cut of the colony arms was in the title. Timothy Green died August 3, 1763, aged sixty.
>
> Timothy Green, son of Samuel and grandson of Deacon Timothy, brother of Thomas and Samuel who founded the "Connecticut Journal" in New Haven, learned his trade of his uncle Timothy and assumed charge of the New London printing office at his uncle's death in 1763. In November, 1763, he issued the "New London Gazette," which in the course of a few years was changed to the "Connecticut Gazette." Samuel Green, son of the Timothy who founded the "New London Gazette," succeeded his father in the management of the "Gazette." He invented the first ruling machine and a rotary press. He died in Hartford in 1869 in his ninety-second year. His son Samuel H. Green took charge of the "Gazette" in 1840, and changed its politics, coming out strongly for Van Buren. In that year John Jay Hyde was editor of the "Gazette." He was regarded in New London as a

smart chap. He went to California in 1849, but later returned and settled in Washington, where he was public printer for twelve years.

About the end of 1840 Samuel H. Green relinquished the "Gazette" to Albert G. Seaman. The newspaper closed its career in 1844, evidently while under Seaman's management. It had lived through a period famous in American history, in a part of which New London figured prominently. Bancroft says of the newspaper's connection with it: "The day the Stamp Act was to go into operation, November 1, 1765, was the publication day of the 'Gazette,' so that the publisher was one of the persons called upon to stand the brunt in bearing the penalties of the act, and he issued his paper that day in defiance of the power of the British government without the stamps required by the act."

There was a period of brief publications contemporaneous with the "Gazette." James Springer inaugurated the "Weekly Oracle" in 1796 and published it for four years. Charles Holt established the "Bee," a Democratic paper conducted with so much ability and spirit as to secure for the editor imprisonment and fine under the sedition laws of the administration of John Adams. It first appeared in June, 1797, and continued until 1802, when Holt transferred it to Hudson, New York, where he continued it for many years. The "Republican Advocate" was a Democratic newspaper first published by Clapp & Francis in February, 1818, and afterward by J. G. Clapp until its discontinuance in 1828. The "Commercial Sentinel" was an anti-Masonic paper published by John B. Eldredge, and succeeded the "Advocate" for about a year. The "Workingman's Advocate" was a very radical Democratic paper edited

by Dr. Charles Douglass and J. George Harris, begun in 1830, and lasting a year.

The "People's Advocate," a Whig newspaper started in 1840, had more of a history. In the beginning Benjamin P. Bissell was its publisher and John Jay Hyde its editor, who was soon succeeded by Thomas P. Trott. In 1843 it passed into the hands of J. Guy Dolbeare and W. D. Manning. In November, 1844, there was started in connection with the "Advocate" the "Morning News," with a page twelve by nine inches, the first daily in New London. Dolbeare sold out in 1848 to C. F. Daniels and F. H. Bacon, and removed to California. The new company merged the papers into the "Daily Chronicle" and the "Weekly Chronicle." Bacon died and Daniels became sole proprietor and editor from 1851 until the day of his death in 1858, when the paper was sold to William O. Irish, who continued to be proprietor until 1862, when he died. During much of this time Charles W. Butler was editor. After the death of Irish, Samuel Fox was editor and proprietor until it was discontinued in 1868.

In March, 1845, J. M. Schofield and S. D. MacDonald commenced publication of the "New London Democrat." Before the end of the first year Schofield became sole proprietor, and on January 1, 1848, he started the "Morning Star," daily. Of Mr. Schofield his son, William B. Schofield, now a resident of Worcester, furnishes this information:

> James Munroe Schofield started his newspaper in New London when he was twenty-one years of age, editing and publishing it for several years, when he secured the position of Collector of the Port of Stockton in California, about 1850. He and his wife, Madilia Roche Schofield, lived in Stockton for several years and

their first child, James Munroe Schofield, Jr., was born there. Mr. Schofield, in addition to his office as Collector of the Port, had a considerable business in wholesale miners' supplies, and returned east while still a young man, in comfortable circumstances. He made Hartford his home, and there founded the "Hartford Post" when he was about thirty-five years of age. He published this paper for several years, and upon selling it removed to Worcester, which he made his home for the remainder of his life.

When James M. Schofield removed to California, D. S. Ruddock became editor and proprietor of both the "Democrat" and "Star." For a short time the firm was Ruddock and Jackson, but Ruddock afterward assumed full ownership, which he continued to April, 1873. Both papers were formerly Democratic, but early in the Civil War, under pressure of circumstances, they became Republican.

The "Press," not to be confused with the later "Penny Press," was an evening paper commenced January 1, 1868, by Gilbert R. Fox, Isaac C. Sistare, Robert S. Hayes and Daniel Lake. It was discontinued in the following August. The "New London Daily Times" was an independent newspaper started by E. C. Rice in 1871 and discontinued in two months.

The "New London Evening Telegram" was first issued May 10, 1873, with Courtland I. Shepard as business manager, John A. Tibbits, political and supervising editor, John C. Turner, news editor. At first its politics was independent Republican, but later a changed ownership ordered its politics to be Democratic. It had a fight for existence after the founding of its rival, the "Day" in 1881, and succumbed to the inevitable in 1885, having taken over the "Star" and terminated its publication in 1881.

John A. Tibbits, power in politics (he became speaker

of the Connecticut House of Representatives in 1886), newspaper man of note, was the leading spirit of the group that organized the "Day" in 1881. With him were associated John C. Turner, who had been news editor on the "Telegram," William J. Adams, a man with some means and newspaper experience, and John McGinley, a New Londoner who was both travelled and genial, and who later became prominent in Connecticut politics and postmaster of New London. Tibbits was a lawyer and a Civil War veteran—a major. He had not liked his enforced change of politics on the "Telegram," and he wanted a paper of his own.

The first issue of the "Day" was on July 3, 1881, and the paper was issued in the morning for some years after its beginning. Its publishers found immediately that they had a fight with the "Telegram" on their hands. Tibbits, who had little capital, interested several local men of means, and a stock company was formed. Turner and Adams soon withdrew. Tibbits and McGinley, working together, tried all sorts of new moves in a newspaper fight. First they started an evening edition, the "Penny Press," to bother the "Telegram." A one-cent paper was a novelty; it took well, and probably achieved its purpose, but started in December, 1881, it was withdrawn in the fall of the next year. Later somebody evolved the brilliant scheme of putting the price of the "Day" down to a cent, and making it a state-wide paper. There were few morning newspapers in the State in 1882, and New London's railroad facilities were good. They got for the "Day" a considerably larger circulation than it has had since, and they lost considerable money before the management woke up to the fact that a one-cent paper, expensively circulated,

and without sufficient advertising patronage, made its publishers poor in proportion to the size of their circulation.

In the decade from 1881 to 1891 the "Day" had driven out its rivals and had the field to itself, but it was far from prosperous. So when Theodore Bodenwein acquired the paper in 1891, he did not pay a large amount in cash. He had been in with the group at the start, but had not remained. In the years between he had been two years in the composing room of the "Day," and a year with the "Telegram." In 1886, just after the latter suspended, he, J. G. Lynch, Walter Fitzmaurice and George A. Sturdy had founded the "Morning Telegraph," the "Day" having just before that changed to the evening field. In 1890 Mr. Bodenwein sold his interest in the "Telegraph," and the next year he acquired control of the "Day." Tibbits was out of it then, but McGinley remained, and was associated with the "Day," for the latter part of the time as editorial writer, for nearly ten years.

The "Day" went steadily on under Mr. Bodenwein's direction. In 1894 he removed it to a more suitable building newly erected by the Chappells on Bank Street, and in 1907 to his own building, erected on Main Street, where it is still published, with Mr. Bodenwein as practically the sole owner.

When Mr. Bodenwein left the "Morning Telegraph," George A. Sturdy also left and founded a paper of his own. That left the "Telegraph" on Mr. Fitzmaurice's hands. He conducted it till 1901, then sold the paper to Mr. Bodenwein, who made it a morning edition of the "Day" until 1906, when he proposed to suspend it. Frank J. Brunner, who had been managing editor of the

"Day," asked to have a try at making it go, and Mr. Bodenwein gave him the paper free from all encumbrances. After a series of vicissitudes, in the course of which Mr. Brunner withdrew, and several changes of ownership at the last, the "Telegraph" suspended in 1920.

The paper which George A. Sturdy, associating with him Samuel T. Adams, established in 1890 was the "Globe," evening. Sturdy and Adams published it together until 1915, when Sturdy retired. It is still published under the name of the Daily Globe Publishing Co., with Mr. Adams as editor and manager.

The "Binnacle" was a weekly which L. E. Whiton started in 1904, and which lasted about a year. Before that there had been a "Sunday Globe," which lasted from 1890 to 1896, and a "Bee" from 1890 to 1891.

Norwich Newspapers

The pioneer newspaper was the "Norwich Packet and the Connecticut, New Hampshire and Rhode Island Weekly Advertiser." This was the ambitious title of the first newspaper which appeared at Norwich. It bore the date "From Thursday, October 1, to Thursday, October 7, 1773." The "Packet" was a small four-page sheet, varying somewhat in size and typography with the unequal fortunes of the colonists during the exciting years of its issue, but the pages were generally about nine by fifteen inches in size.

The "Packet" was issued at first by a firm composed of Alexander Robertson, James Robertson and John Trumbull. They were editors, compositors, pressmen, mailing clerks, business managers, publishers and newsboys. The Robertsons were brothers—"Scotch inter-

lopers" the sons of liberty called them—and Tories in politics. A reference to the rare files of the "Packet" shows that its editors allowed the partisans of liberty as ample scope in its columns as the loyalists. Nevertheless feeling ran so high during the Revolution that the Robertsons found it wise to leave Norwich, where it had been their manifest intention to make themselves a home. They put the paper into Trumbull's hands and fled to New York, where in 1768, they had begun their journalistic careers, setting up a royalist press there on their return.

The "Packet" was first issued from an office at the foot of the Green, near the courthouse. In 1775 it was removed to a building "near the meeting-house," whence it was issued up to the time of its discontinuance. Its price was six shillings, eight pence per annum.

Trumbull carried on the paper from the summer or early fall of 1774, when the Robertsons left Norwich, until his death, August 14, 1802. Not long before his death the name of the paper was changed to the "Connecticut Centinel," and was issued under that name for several years by his widow, Mrs. Lucy Trumbull, and his sons, Charles E. Trumbull and Henry Trumbull. The course of business, however, was already towards "Chelsea" or "The Landing," as the present city was called, and the publication of a paper at the old town became unprofitable. It was discontinued and had no lineal successor.

November 29, 1790, appeared the first number of the "Weekly Register," published by Ebenezer Bushnell, "twenty-four rods west of the meeting-house," a four-page sheet eighteen by eleven inches, and competed vigorously for the patronage of the "Packet." In Oc-

tober, 1793, Bushnell retired and was succeeded by his brother-in-law, Thomas Hubbard. In 1796 he removed his business to the landing. He named his paper the "Chelsea Courier," although it was really a continuation of the "Register." "Price to subscribers $1.67 per annum, exclusive of postage. One-half the subscription will be expected on delivery of the first number."

May 31, 1798, the "Chelsea Courier" appeared as simply "The Courier." August 5, 1800, the words "Chelsea society" were omitted from the date line and "Norwich, Conn.," substituted. November 13, 1805, Thomas Hubbard retired and was succeeded by his son Russell Hubbard. March 22, 1809, the name was changed to "Norwich Courier." February 12, 1817, Theophilus R. Marvin joined with Hubbard in publishing the paper, but his name was dropped February 17, 1819. April 3, 1822, Hubbard sold the paper to Thomas Robinson and John Dunham, who on April 10 added four columns and otherwise improved it. Robinson retired in March, 1825, and Dunham conducted the paper until September 15, 1841. The "Courier" then passed into the hands of the Rev. Dorson E. Sykes, who was evidently a pushing man, for on March 7, 1842, he began the issue of the "Daily Courier," a small sixteen column, penny sheet, which failed to pay expenses and was discontinued August 12, 1842. It was promptly followed, however, by a tri-weekly, the weekly edition being steadily continued through all changes.

At this time the office of the paper was at 51 Water Street, but on October 28, 1845, it was removed to Franklin Square, and the next number appeared under the title of "Norwich Evening Courier," though still a tri-weekly, and in an enlarged form. In the spring of

1846, Mr. Sykes adopted the plan of advance payments from subscribers, and the paper soon had a better financial footing.

At the close of November, 1858, the tri-weekly was discontinued and December 1, the "Daily Courier" again appeared; D. E. Sykes, editor and proprietor, C. D. Rice, manager. Sykes retired the following February and was succeeded by George B. Smith in control of the paper. Smith's career was short and disastrous, and on October 3, 1859, Sykes again assumed the management. The daily was discontinued again and a semi-weekly edition took its place. H. C. Kinne succeeded Sykes, June 6, 1860, when the paper was changed to the "Evening Courier." On August 20, 1860, a daily edition was once more started but proved the shortest lived of all. Both daily and weekly ceased publication at the close of November, and for two weeks there was a hiatus. During this fortnight the "Courier" was bought by Manning, Platt & Company, and revived as the weekly edition of the "Morning Bulletin," in connection with which daily it has since been published.

The "Norwich Morning Bulletin" was established December 15, 1858, by W. D. Manning, N. Perry, I. H. Bromley and Homer Bliss, under the firm name of Manning, Perry & Company. Bromley was editor, Perry business manager and Manning had charge of the printing. Soon after its first number, the publication of a weekly edition was begun and called the "Eastern Bulletin." September 7, 1860, the firm was Manning, Platt & Company (W. D. Manning, C. B. Platt and I. H. Bromley). The purchase of the "Courier" was speedily

followed by the discontinuance of the "Eastern Bulletin."

Bromley was editor until July 26, 1862, when he enlisted as a captain in the 18th regiment, Connecticut Volunteers. During his absence W. H. W. Campbell was acting editor. At the close of the war Bromley was again in the editor's chair which he held until 1868, when Mr. Campbell succeeded him.

The Bulletin Association was formed in December, 1863, and published the "Bulletin" and "Courier" until 1870 when the papers was purchased by Campbell & Co., (W. H. W. Campbell, William Fitch and Charles Spalding). The Bulletin Company was formed March 1, 1873, when A. S. Bolles became editor. May 1, 1874, Bolles gave way to E. J. Edwards, the paper being under the management of William Fitch after March 8, 1875. May 1, 1875, Edwards was succeeded by Mr. Campbell in the editorial room who again gave way to Bolles December 17, 1875. Bolles retired in June, 1881.

The business management of the "Bulletin" was in charge of C. B. Platt to February 1, 1868; H. P. Gates, to January 1, 1870; William Fitch to March 1, 1873; E. C. Rice to March 8, 1875; William Fitch, again to December 14, 1875; Charles E. Dyer to May 1, 1880.

June, 1804, Consider Sterry, John Sterry and Epaphras Porter began the publication of a political paper, the "True Republican," devoted to Jeffersonian Democracy. It lived about three years.

February, 1812, Samuel Webb issued the first number of the "Native American," from a press in Norwich Town. In 1820 Webb transferred his press to Windham, where he, with Horatio Webb and Henry Webb,

began the publication of the "Independent Observer and County Advertiser" on July 1, of that year.

In September, 1828, the "Norwich Republican" was issued by Boardman & Faulkner. In 1829 the firm name was changed to Adams & Faulkner. In the same year the "Stonington Telegraph," which had been issued at Stonington, was merged with it. Adams remained in editorial charge till 1831 and the paper was discontinued in 1838. During the last three years it was a Whig organ published by Marcus B. Young and edited by Lafayette S. Foster.

In 1826 to 1829, the prospects of a canal from Norwich to Worcester were widely discussed, and Levi Huntington Young seized upon the theme of the day for his new paper the "Canal of Intelligence." Marcus B. Young issued the "Norwich Spectator" in 1829 and the "Norwich Free Press" in 1830. Park Benjamin was editor of the first, but both were short-lived. The "Religious Intelligencer," edited by J. Huntington and published by J. Dunham, appeared June 11, 1831, but was soon discontinued.

In May, 1841, John G. Cooley began the issue of "Total Abstinence" as a monthly. It was the first paper advocating total abstinence to be published in the State. At the end of two years it was followed by a weekly of the same name. Later it became the "Spectator" and was sold to B. F. Taylor, who called it the "Norwich Gleaner."

The "Norwich News," "Paixhan Gun," "Needle" and "American Patriot" were ephemeral publications of this period. The "Weekly Reporter" begun in 1845 lived three or four years. In January, 1852, E. S. Wells started the "Norwich Tribune." It soon passed into

the hands of C. B. Platt and Edmund C. Stedman, who made of it the best paper that Norwich had yet seen. It was too good to live and ceased to exist in June, 1853. The "Examiner," an advocate of the Maine law, Sabbath observance and the improvement of the common schools, was first issued July 16, 1853. John G. Cooley was its publisher and office editor, and among the editorial writers were Rev. H. P. Arms, Rev. J. P. Gulliver and Rev. J. A. Goodhue. It survived till November 16, 1855. A Know-Nothing organ, the "State Guard," was published during a part of 1855 and 1856, and the "Weekly Reveille" ran a few numbers in 1858.

May 20, 1835, J. Holbrook began the issue of the "Weekly Aurora." In 1838 it became the property of Gad S. Gilbert and afterwards of William French and French & Conklin. On August 8, 1844, John W. Stedman became editor, proprietor and printer. In 1860 the "Daily Aurora" was connected with the office. On January 21, 1867, the publication of the "Daily Advertiser" was begun. It was a large folio devoted to Democratic principles. The last issue was August 1, 1874. The "Aurora" ceased November 26, 1878. "Cooley's Weekly" began issue July 15, 1876, by the veteran printer and publisher John G. Cooley, who retired in 1880 because of impaired health and was succeeded in the management by his son John G. Cooley, Jr. David S. Adams was editor. In the summer and fall of 1877 was published the "Reformer" as a temperance paper and the "Vim" from May to October, 1878, both by Rev. Hugh Montgomery. The "No License Advocate" was published May to October, 1879, by Revs. L. T. Chambers, L. W. Bacon and Hugh Montgomery. In the fall of 1879 the "American Conflict" was begun by Henry

Brown, and has been published as a weekly, semi-weekly or monthly. The "Observer," a weekly paper, by Daniel Lee, was published from April 8, 1879, to May 22, 1880. The "Evening Star," a daily afternoon paper, by Gordon Wilcox, lived from May 15, 1880, to June 25, 1881.

The history of Norwich newspapers in the past forty-five years has been one of steady progress on the part of the survivors of the long line which had risen and fallen, with only one important addition, and a few diverting incidents. The "Bulletin" has taken the place due to it by seniority. Col. Hugh Henry Osgood, who was elected president of the Bulletin Company in 1873, continued until 1884, when he was succeeded by Amos W. Prentice until 1889. Then Colonel Osgood was re-elected, and was president till 1889. H. H. Gallup was president from 1899 to 1908; Charles D. Noyes from 1908 to 1924.

Since 1898 W. H. Oat has been manager of the "Bulletin," and under him the newspaper has had a physical rejuvenation to match its virile spirit. In 1904 he established it in a new building, with the most modern equipment. There has been in the later period at least one distinguished addition to the long list of notable editors. A. Walton Pearson became editor of the "Bulletin" in 1893, and remained until his death in 1919. He was a sound thinker and an able writer, and his daily editorials, together with the weekly philosophy of his "Man Who Talks," kept the "Bulletin" distinctly in the forefront of the press of the State.

The "Norwich Record" was established by John G. Lynch May 22, 1888, as a Democratic organ. Within two years it had changed ownership three times, until

on May 1, 1890, it was purchased by Allan Cleworth and Frank H. Pullen, who in 1888 had come to Norwich from Massachusetts, and purchased "Cooley's Weekly." Since 1890 the newspaper has been conducted as an independent local journal, published in the evening. Mr. Cleworth died in 1906, and Mr. Pullen formed the Pullen Publishing Co., under which name he has since conducted the paper. "Cooley's Weekly" has been continued as the weekly edition of the "Record."

Gordon Wilcox, for some years after 1881, continued the spirit of the deceased "Evening Star" in the "People's Weekly Gazette." This was continued until 1919, when it ceased publication.

There were three attempts at daily publication in the 'nineties, none of which seems to have made a lasting impression. The "Norwich Post" was begun in 1892 and ended in 1898. The "Morning Index" existed from 1895 to 1897, and the "Morning Call," in a sense its successor, was published in 1898 and 1899.

Newspapers of Stonington

In the days before the misguided King of England spent (by estimate) "ten thousand pounds to have a dash at Stonington," four newspapers had been founded, run their course and ceased to be at Stonington. The settled village then was "Stonington Port," the settlement on Long Point. John Trumbull, printer, of Norwich, had a son Samuel, who in 1798 came to Stonington Port and established the "Journal of the Times," publishing the first issue on October 2. He printed twelve numbers on small-sized sheets, but in January of the next year enlarged it to large folio. In 1800 he changed the name of the paper to the "Impartial Journal." This began on

October 8, 1799, and was continued until May 1, 1804, when the publication ceased. Mr. Trumbull demonstrated ability as a publisher and a liking for politics of the Democratic brand, but he became a merchant in 1804, and found that paid better than newspaper-making.

John Munson came from New Haven and published on July 15, 1807, the first number of "America's Friend." The last issue of it that has been located is of September 28, 1808. It probably was not published far beyond that.

A weekly which called itself a newspaper, but was in appearance a magazine, was the "Patriot," whose publication was begun, also by Samuel Trumbull, on July 24, 1801. It had the added title of the "Scourge of Aristocracy." It scourged, as far as can be ascertained, only about a year.

No further publication attempts were made until 1824, a good many things having happened in Stonington in the interim. In March of that year Samuel A. Seabury, coming from Long Island, began the publication of the "Stonington Chronicle." The editor died suddenly before he had issued another number, and nobody took up his task under the same name. But in July of that year William Storer, who had been a publisher at Caldwell, at the head of Lake George in New York, began the "Yankee," whose cryptical motto was, "where liberty dwells, there is my country." Mr. Storer continued the paper for three years as the "Yankee," then its name became the "Stonington Telegraph," and it continued until July 22, 1829. The publication venture, though producing a good newspaper, was decidedly not a financial success.

The vacuum was filled in 1832 by the "Stonington Phoenix," which presently became the "Stonington Chronicle," published by Charles W. Denison and William H. Burleigh, the famous preceptor of Plainfield Academy. This enterprise lasted for two years, and was a complete failure. The printer for it had been E. B. Kellogg, who came down from Hartford.

Nevertheless, Thomas H. Peabody of North Stonington boldly ventured in again the same month of May, 1834, in which the previous papers suspended. He called his paper the "Stonington Spectator." He was assisted by David Austin Woodworth of North Stonington and later by Marcus B. Young of Norwich. Mr. Peabody's health broke down, and his paper expired after six months.

After that there was a hush of thirty-five years. The time being ripe, on November 27, 1869, Jerome S. Anderson launched the "Stonington Mirror." Mr. Anderson had learned wisdom from a previous unfortunate attempt at publication, and this venture was a success from the start. He continued it for many years, and now the publication is carried on by his son, Jerome S. Anderson, Jr. With it is published an edition for Mystic, the semi-weekly "Mystic Journal."

Other County Newspapers

There is record of a "Mystic Pioneer," published from 1859 to 1869, but it is indefinite as to publisher. There was, however, a "Noank Pioneer," published in 1902 as as edition of the "Groton Review," which was printed in the latter town from 1891 to 1907, when it succumbed to the competition of the aggressive New London dailies. The "Colchester Advocate" was published from 1887 to

1896 by Edward F. Bigelow of Portland as a Colchester edition of his "Middlesex County Record." The "Taftville Item" appears in 1888 as a publication from the press of Charles F. Burgess, then of Jewett City and publisher of the "Jewett City Press," which he founded in 1885. This newspaper is now published by the Press Publishing Company, and F. A. Crockett is editor. The "Niantic Herald," now almost forgotten, was published in 1889 and 1890. F. W. Babcock of Lyme started the "Sound Breeze" in that town in 1889, and kept it blowing until 1905.

Fairfield County

Of the newspapers now published in Fairfield County the oldest in its origin is what is now, after some changes of name, the "Bridgeport Times and Evening Farmer," or more briefly the "Bridgeport Times." The newspaper was founded in Danbury in 1803 as the "Republican Farmer." It was not the first publication to be started in Danbury. The oldest newspaper there, hence the first to be started in the county, was the "Farmer's Journal" by Nathan Douglas and Edwards Ely in 1790. It lasted three years. The partners parted when it ceased, and in 1793 Nathan Douglas started the "Republican Journal" and Edwards Ely the "Farmers Chronicle." The former promptly died, but three years later was revived by Nathan Douglas and Stiles Nichols, and lasted four years. The "Farmers' Chronicle" lasted until 1796.

The "Republican Farmer" was established in Danbury by Thomas Rowe & Company. After nine months, in June or July, 1804, Joseph Hutchinson purchased it, and on November 28 Stiles Nichols came in and the firm

became Nichols and Rowe. That lasted for a year, then Nichols became sole proprietor. In the period from January to June, 1808, the uneasy firm became Nichols & Son, and again on October 19 of the same year it was altered to Stiles Nichols and Milton F. Cushing. Nichols was again sole proprietor in June, 1909, but the paper was discontinued soon after. It was revived within two months by Ephraim F. Nichols & Company.

It having by that time become evident that the climate of Danbury did not agree with the "Republican Farmer," it was removed to Bridgeport, where the first issue of it was on April 25, 1810, with Stiles Nichols & Company as publishers. Bridgeport had seen three newspapers before that, and all of them had disappeared. The coast was clear. The earliest of these publications was the "American Telegraphe," founded by Lazarus Beach in 1795, when Bridgeport was still "Newfield." Five years later the name of the town was changed, and the first issue of the "Telegraphe" with the Bridgeport imprint was on November 5, 1800. Beach appears to have sold his paper the next year, and repurchased it in 1802. But issues in July, 1903, indicate that Samuel Mallory was then the owner of the paper. It died in February, 1804, "after a lingering illness," according to a contemporary.

There was a "Bridgeport Herald" as early as 1805, when Samuel Mallory published the first issue on February 28. Little is known of it. It died in the spring of 1806, as definitely as can be learned. The third member of a short-lived trio was the "Bridgeport Advertiser," which Hezekiah Ripley established in April, 1806. Its history also is shrouded in uncertainty, but Mr.

Ripley seems to have discontinued it in the spring of 1810.

So now the "Farmer" went ahead. Ephraim Nichols left the firm of Stiles Nichols & Company on January 1, 1812, and Stiles Nichols went it alone until the firm name became Nichols & Barnum later in the year. It was Stiles Nichols & Company again in 1814, and shortly after was changed to Stiles Nichols & Son. In 1818 Nichols became once more the sole owner. Successive changes since 1820 have been Pomeroy & Nichols, William S. Pomeroy, Pomeroy & Morse, Pomeroy, Gould & Co., Gould & Stiles. About 1870 H. B. Stiles and Floyd Tucker became the owners, and continued until the death of Mr. Stiles in 1911. The Farmer Publishing Company then continued with M. E. Stiles as president and Floyd Tucker as secretary and treasurer until 1921. The name of the paper had been changed to the "Bridgeport Times" in 1918, and in 1921 the officers of the Times Publishing Company were Lynn W. Wilson, president, and James L. McGovern, secretary. Late in 1924 it was announced that the newspaper, then running under the name of the "Bridgeport Times and Evening Farmer," had passed to the control of Kendall B. Cressy, with the formation of a new organization to be known as the Bridgeport Times Company. The newspaper has conducted a daily edition since 1854. Its weekly edition was discontinued in 1921.

The same year the "Farmer" came to Bridgeport Nathaniel L. Skinner started the "Connecticut Courier." It was a weekly of the then familiar type, and seems to have enjoyed fair support, though little is known of it today. It continued after 1820, probably for two or

three years. It was followed in 1826 by the "Connecticut Patriot," published by L. Bradley & Company. From the lack of traces now found, its existence must have been brief. George W. Smith, Jr., started the "Spirit of the Times," an anti-Masonic journal born of the Morgan sensation in 1831. It met with considerable support, claiming a circulation of 800. It was later sold to John Swaine, but probably continued for only a few years. The "Bridgeport Chronicle," by B. H. Munson in 1848, had an even shorter existence. T. M. Clarke, who was later editor of the "Winsted Herald," started the "First Bridgeport Leader" on March 25, 1854. It was published by the Bridgeport Printing Company. It fell by the wayside after fifteen numbers.

Edmund Fanton had started in 1830 a weekly newspaper he called the "Bridgeport Republican." In 1839 he sold it to A. A. Pettengill, who that year started as editor and proprietor the "Republican Standard." Nine years afterward, in 1848, Julius S. Hanover was admitted to partnership. In 1853 a tri-weekly edition was started, and in 1854 the paper became a daily. In September, 1863, on the purchase of the paper from Pettengill and Hanover by John D. Candee of New Haven, the Standard Association was organized, with Mr. Candee as president, and J. W. Knowlton, who was also business manager, as secretary and treasurer. In 1867 George C. Waldo joined the organization as city editor, beginning a service as editor and president of the company which lasted almost unbroken for over fifty years. Frederick H. Stevens became treasurer and manager of the business in 1893, and continued up to 1913. At that time a new element came into the ownership, and the officers the following year were Alfred B. Beers, presi-

dent, Edward W. Nicholson, treasurer and Edward Morrison, general manager. The "Standard" about that time became listed as the "Standard-American." George C. Waldo, Jr., son of the veteran editor, was president of the association in 1917, but in 1919 the association was no more, the paper having been purchased by the McNeils, who owned at that time the far younger "Morning Telegram," and published by the Morning Telegram Company. The final act was the discontinuance of the "Standard-Telegram" in 1920 by the new interests which had purchased the "Telegram" and the "Post."

Meanwhile the first morning newspaper appeared on the scene in 1874, when Major Henry M. Hoyt established the "Morning News." He suspended it after a few weeks. Five years later his courage revived, and he re-established the paper in 1879. He continued it until his death in 1885, when Louis C. Prindle took the "News," transferred it to the evening field and ran it to 1898.

The "Bridgeport Sun" ran from 1877 to 1889. Its publisher was William H. May.

George W. Hills, Frank W. Bolande and Ralph N. Blakeslee established the "Bridgeport Evening Post" in 1883. Later H. M. Hills was admitted, and in 1892, when the "Post" started a morning edition, the "Telegram," the officers of the Post Publishing Company were: President, George W. Hills; vice president, H. M. Hills; secretary, F. W. Bolande; treasurer, R. N. Blakeslee. Meanwhile, the "Morning Union" had been started also in 1892. There was a merry race between the two morning papers for ten years, and the "Telegram" won, the Post Publishing Company purchasing

the "Union," which in 1902 disappeared, except that this year Bridgeport's morning paper was the "Telegram-Union." This continued for four years, but in 1906 the hyphen was dropped, with what followed it. The Union Publishing Company consisted of J. C. Chamberlain, president; F. A. Bartlett, secretary, and Charles D. Ocain, treasurer.

The "Post" and "Telegram" continued to prosper, but under divided ownership after that year. Frank W. Bolande became head of the Post Publishing Company, R. N. Blakeslee remaining as his associate, together with William H. Comley, Jr. George W. Hills, associating with him William H. Comley, Sr., continued to carry on the "Telegram." This arrangement continued without change for six years, except that in 1912 the Sunday edition of the "Post" was started, and Buckingham Marsh had become associated with George W. Hills as secretary and assistant treasurer. In 1913 Archibald McNeil, Sr. and Archibald McNeil, Jr. became owners of the "Telegram," and the latter was president of the company, this change terminating the long connection of George W. Hills with the publishing business in Bridgeport. But Frank W. Bolande, who had been the guiding genuius of the "Post" for nearly forty years, died in 1916, and the following year the McNeils appeared as the proprietors of both newspapers.

In 1918 came the final change of the present period, when the McNeils sold both morning and evening papers to interests represented by Russell Whitman, who became president of the company, and Edward Flicker, who the following year became business manager. George C. Waldo, Jr., was made secretary of the com-

pany and editorial director of both papers, and that management was in continuance in 1924.

The "Bridgeport Star" was founded as a weekly in 1892 by William H. May, and was so published by him for over twenty years. In 1920 the "Star" outfit was acquired by the publishers of the "Sunday Herald," and an evening "Star" was started. This succeeded the "Evening Herald," which the same company had conducted in the previous year. In 1821 the "Star's" publisher was the Evening Star, Inc., of which William Shaughnessy of Derby was president, D. J. McCarthy, vice president, J. E. Phelan, secretary and George B. Clark, treasurer. The Evening Star, Inc., still continued in 1924.

The "Bridgeport Herald" was founded as a Sunday publication in 1888, F. R. Swift being its publisher. He continued the publication until his death in 1911, since which time Richard Howell has been editor and manager. The "Herald" has a general state circulation, and for many years published a special edition for Waterbury called the "Waterbury Sunday Herald."

"Bridgeport Life," a weekly magazine of local social and community intelligence, was started in 1913, and still continues. The "Independent Leader," probably no relation to an earlier publication of a similar name, was published from 1890 to 1905. There was an "Eagle" of brief flight from 1880 to 1882. The "Kennel," a dog fancier's magazine, appears from 1884 to 1886. The "Connecticut Union" is in the lists from 1894 to 1897. The "Bridgeport Advocate" began in 1896 and the "Enterprise" in 1908. Both ended in 1914.

Newspapers of Danbury

The history of journalism in Connecticut contains nothing more romantic than the story of James Montgomery Bailey, the "Danbury News Man," who found himself transformed almost literally "over night," by the homely genius of his own pen, from an obscure small-town editor into a nationally and internationally known literary figure, the most widely read and discussed humorist of his day. His little weekly newspaper with a circulation of fewer than two thousand copies grew in the space of little more than six months' time to a circulation of more than thirty thousand, with separate editions for its readers here and those abroad.

That was back in 1873, and perhaps never before nor since has any American newspaper man—certainly none among those of Connecticut—come into such overwhelming popularity as a humorous writer in such an amazingly short time.

"On January first, 1873," says a sketch of the Danbury News Man and his paper, contributed to the History of Danbury, "the paper appeared in eight-page form and had a circulation of 1,920. This circulation was entirely local, being confined to Danbury and the neighboring towns. On September first following, the edition of the paper numbered thirty thousand copies. This is perhaps the greatest gain made by a newspaper and far outdistances the record of the 'New York World,' remarkable as that is. The 'News' was simply a country newspaper at the time, with no attractive literary features, but the dry humor and wit of 'The Danbury News Man' brightened its columns and made it a welcome guest in many homes."

Mr. Bailey virtually began his newspaper career as a correspondent of one of the Danbury papers while a soldier in the Seventeenth Connecticut Volunteers during the Civil War. At the conclusion of the war he returned to Danbury and with one of his army comrades, Timothy Donovan, a practical printer, purchased the "Danbury Times," a weekly Democratic newspaper. After a while they bought the rival Republican sheet, the "Jeffersonian," and in March, 1870, the plants were united and a new paper, the "Danbury News," established. In 1878 the firm of Bailey & Donovan dissolved partnership and Mr. Bailey became the sole owner of the paper, which he conducted until his death in 1894. A daily paper, the "Danbury Evening News," was established by Mr. Bailey in 1883, and the publication of both daily and weekly editions has been continued since that time.

The business was bequeathed by Mr. Bailey to his brother-in-law, George W. Flint, who had been the business manager of the paper several years, and his half-brother, William L. Smith, with others of his family. Messrs. Flint and Smith acquired the other interests in the business after a short time and continued the publication of the paper under the firm name of Flint & Smith until their deaths, a few years ago, since which time the business has been conducted by their heirs, under the name of the Danbury News Publishing Company. Frederick B. Dalton, the present manager, and one of the owners of the "News," is a nephew of the late George W. Flint and was associated with him in the management of the business. He has been connected with the "News" since, as a youth, he entered the employ of the paper several years before the death of Mr. Bailey.

In 1803 Sellick Osborne established the "Republican Farmer" in Danbury and continued its publication until 1805, when he sold it to Stiles Nichols, who continued it here until 1810. It was then removed to Bridgeport and subsequently became the "Bridgeport Farmer."

In 1812 the "Day" was published in Danbury. There is no authentic record of the name of its publisher.

Orrin Osborne established in 1826 the "Danbury Recorder," a neutral newspaper. After the death of Mr. Osborne Washington and Moses Yale conducted the paper under the same name.

In 1832 the "Recorder" was sold to Alanson Taylor, who published it under the name of the "Connecticut Repository."

The "Herald of Freedom and Gospel Witness" was published by the late P. T. Barnum, afterwards world-famous circus man, in his native place, Bethel, and was afterwards purchased by the Rev. L. F. V. Andrews and moved to Danbury, where it was continued under the name "Herald of Freedom." While Mr. Barnum was in confinement in the Danbury jail as a debtor he continued to edit the paper from the jail.

The "Danbury Gazette" came into the field about this time, succeeding the "Connecticut Repository," the first issue being printed in 1833. The "Gazette" was succeeded by the "Danbury Chronicle and Fairfield County Democrat," which made its appearance in 1836. This was succeeded in 1837 by the "Danbury Times," established by Edward B. Osborne.

In 1860 the "Jeffersonian" was started, with W. A. Croffut, afterwards a widely known Washington correspondent, as its editor. W. A. Newton and B. F. Ashley were connected with this paper a little later. In

1865 J. H. Swertfager purchased the paper and continued it until it was sold to Bailey & Donovan, who, already possessing the "Danbury Times," merged the two into the "Danbury News."

The "Danburian," published by C. E. A. McGeachy, appeared in 1875 and in 1878 Timothy Donovan, who had retired from the "Danbury News," started the "People," a Greenback paper. Both were of short duration.

The "Globe" was established by W. F. Page in 1874; the "Democrat" by L. K. Wildman in 1877 and the "Republican" in 1879 by Walker Bartram. The late William A. White also established a weekly paper in the town about 1882. The longest of these to survive was the "Democrat," which lived until 1888. The "Globe" ceased in 1882, and the "Republican" in 1885. Two daily papers were the "Dispatch" and the "Press." The former lived from 1893 to 1898, and the latter from 1888 to 1889. The "Press" had a weekly edition during its continuance.

Newspapers of Stamford

The "Stamford Advocate" had its inception as a weekly on April 8, 1829. It was then called "The Intelligencer" and was conducted by a young man by the name of Alexander Hamilton of Norwalk. He was no relation to the Alexander Hamilton of national fame. The paper was discontinued owing to lack of funds shortly afterward, and in 1830, the need for a newspaper in Stamford beginning to be felt, the "Sentinel" began to be published weekly by William Henry Holly of Stamford. Later this paper became known as "The Far-

mer's Advocate," and still later as "The Stamford Advocate."

William Henry Holly sold out his interests in 1848 to Edgar Hoyt, of Stamford, who carried on the enterprise until 1860, when he in turn sold the paper to W. S. Campbell of New York, formerly of the "New York Commercial Advertiser." W. W. Gillespie was taken into partnership in 1861 and the firm became Campbell & Gillespie. Mr. Campbell died in 1867 and his partner carried on the business under the name of W. W. Gillespie & Company until 1883, at which time he withdrew in favor of his two brothers, R. H. Gillespie, Sr. and E. T. W. Gillespie, who reorganized as the Gillespie Bros. The latter joined the staff as editor of the paper in 1868.

The "Stamford Advocate" became a daily paper on April 4, 1892, at about which time also Robert Whittaker became connected with it as city editor. At the retirement from active editorial work of E. T. W. Gillespie some years later, Mr. Whittaker became editor. When Mr. Whittaker left the "Stamford Advocate" recently to become postmaster of his city, he had rounded out 30 years of service with the paper. The present Gillespie Brothers are the two younger generation of the two Gillespies since deceased, both Schuyler Gillespie, president of the corporation and R. H. Gillespie, treasurer and general manager, being sons of R. H. Gillespie, Sr.

The present editor of the "Advocate" is Paul Lockwood, who immediately succeeded Mr. Whittaker.

The "Stamford Herald," the only one of a long list of other newspapers in Stamford whose career approached two decades, was founded in 1875 by George Baker, a native of Green's Farms in Fairfield County.

He was a school teacher from the completion of his school course till he was twenty-five, when he took up newspaper work and printing. He made the "Herald" a force in Stamford during the nineteen years of its continuance. It ceased in 1894.

Stamford has seen the birth of no less than eighteen other daily or weekly newspapers within the past fifty years—most of them since 1885. One of them only was surviving in 1924. The "Fairfield County Democrat" lasted from 1871 to 1872. The "Stamford Journal," founded the same year, perished in 1874. The "Postal Card" ran its course from 1876 to 1878. The "Comet" made its brief flight from 1883 to 1888. The "Stamford News" ran from 1886 to 1892. The "Constitution," from 1890 to 1891, was almost shorter than its name. The "City Post," daily, managed to last five years from 1891 to 1896. The "Town Crier" lifted up its voice only from 1891 to 1895. The "Standard" lasted from 1895 to 1898. There was a "Daily Telegram" from 1897 to 1902. The "Morning News" and the "Evening Star" shone together in 1914. Of the former, which lasted two years, Michael J. Goode was publisher; and of the latter, which disappeared in about a year, Alfred S. O'Brien was proprietor. The "Stamford Bulletin," weekly, lasted from 1908 to 1914. R. H. G. Cunningham was the proprietor. The "Stamford Republican," by Saul Cohn, was published for a while in 1919. The "Register," a paper for free distribution, was conducted from 1916 to 1920 by Frank L. Kane.

In 1923 the Sentinel Publishing Company was formed in South Norwalk, and purchased the "South Norwalk Evening Sentinel." At the same time it established an

edition in Stamford, known as the "Stamford Sentinel," which continued through 1924.

Newspapers of Norwalk

Four newspapers were published in Norwalk in the period from 1800 to 1820. The earliest, the "Sun of Liberty," had been established in Danbury in July, 1800, by Samuel Morse. In October of the same year it was removed to Norwalk, and there continued for about nine months, when it was transferred to New Haven, where it ceased after a few numbers, Morse having removed from the State.

Its successor was the "American Apollo," published by Joseph Dennis. Beginning in August, 1801, he continued it until the following May, when, appearing to tire of the name, he dropped it, and the next month started the "Independent Republican." He had intended to call it the "Independent Whig," but he found there was a paper of that name in Philadelphia. He continued it two months less than a year.

It was fifteen years after that before journalism had a permanent beginning in Norwalk. Roswell S. Nichols and Philo Price started the "Norwalk Gazette," weekly, on May 6, 1818. They had purchased the old Ben Franklin press and other material left over from previous printing ventures, and with it they started a paper which had an honored history till it ceased in 1900. In 1822 Nichols & Price, having well established and enlarged the paper, sold it to their young apprentice, Seth W. Benedict, who after ten years sold it in turn in 1832 to another apprentice, James Reed. Reed, after two years, desiring to leave town, sold the paper to Timothy T. Merwin, then a prominent lawyer in Nor-

walk. He found, after two years, that it took too much of his time, and sold to William G. Hyer. There were rapid changes of ownership for the next fourteen years —Hyer to J. U. Amerman, brother-in-law of P. T. Barnum; Amerman to Judge Stephen Smith; he to George Taylor; he to James Reed, who continued its publication for nine years, and sold it to James H. Hoyt and A. Homer Byington. This was in 1848, but in July of the following year Byington sold his interest to Hoyt. In July, 1851, Byington repurchased the whole of the property, and took into partnership Henry W. Hyatt, who remained with him three years, retiring to assume the ownership of the "Litchfield Enquirer." In 1858 Joseph B. and George N. Ells became joint owners of the "Gazette," and the firm became and continued until after 1880 A. H. Byington & Company.

This was the General Homer Byington, as he was known in Norwalk, who had been a famous war correspondent for the "New York Tribune" during the Civil War. The story of how he got the first report of the battle of Gettysburg to his paper was a famous one in those days. Getting the only available wire from the battlefield, he occupied it by sending portions of the Bible until he could get the story of the battle complete, and then sent it through. From 1896 to 1906 General Byington was consul at Naples, retiring from the publication of the newspaper.

The "Gazette" in its time was one of the notable newspapers of Connecticut, having on its staff such writers as Dr. E. Edwin Hall and his brother, Storrs Hall, and Orris S. Ferry, United States senator from 1867 to 1875. It was made a daily in 1890, and ten

years later, after a losing fight with younger competitors, it ceased publication.

The "Norwalk Hour," founded as the "Westport Hour" on May 6, 1871, and in Westport, was the outcome of a disagreement between Brainerd W. Maples and what was then the New York & New Haven railroad. He had mislaid his commutation ticket, he refused to pay and was ejected from the train. He sued the company, and while the suit was pending, was annoyed by certain articles appearing in the newspapers favoring, as it seemed to him, the railroad's side of the case. He sought to publish some counter-statements, but most of the newspapers refused to print them. He resolved to have a newspaper of his own in which to publish his side, and being unable to find one for sale, he founded the "Westport Hour." It was a bi-weekly for the first ten months; after that it was weekly.

Mr. Maple's suit dragged through the courts for three years and a half, and was decided in his favor. Meanwhile, he had removed his newspaper to Norwalk, and proposed to discontinue it, but found, to his surprise, that it had paid more than it had cost. He published it for several years with both the Westport and Norwalk date line, having made a consolidation with the "Westport Advertiser." Later it became the "Norwalk Hour." Its daily edition was started in 1895.

Mr. Maples remained sole owner of the newspaper till his death. Subsequent to that, there was incorporated in 1901 the Hour Publishing Company, of which the president was Arthur C. Wheeler, the treasurer and general manager Edward J. Thomas and the secretary William J. Brown. This management continued unchanged to 1923, when Mr. Thomas became

president and general manager, Victor Ferris, secretary and Mr. Brown, treasurer. Mr. Ferris died the same year, after a long term of years with the paper as city editor and managing editor.

The "Sentinel," South Norwalk's newspaper, was founded November 17, 1870, by E. A. Horton, founder of the "Derby Transcript." Within a short time the South Norwalk Printing Company was formed, with D. P. Ely as president and Mr. Horton as manager and superintendent. In a few years the joint stock company was dissolved, and the property was purchased by E. A. Horton and James Golden, who had come up from New York. In February, 1873, Mr. Horton retired and R. H. Golden came in, the firm becoming Golden Brothers. A third brother, John F. Golden, came into the ownership in 1879. Later James Golden acquired the whole property, and the paper was published under his name until his death in 1911. There was a move by the estate to sell the property in 1913, but Mrs. Golden and her daughter decided to continue the publication, and the paper remained in the name of E. L. and A. L. Golden until 1923, when it was purchased by the newly formed Sentinel Publishing Co. The officers in 1924 were: President, Leigh Danenberg; vice president and treasurer, Wendell P. Milligan; secretary, Agnes L. Golden. The company established in 1923 the "Stamford Sentinel." The "South Norwalk Sentinel" was a daily from the beginning.

Norwalk has had the familiar scattering of lesser publications, few of which are traceable at present except as to their covering dates. Some of them are the "Norwalk News," which Edmund E. Crewe founded in 1894 and ran till 1897; the "Morning Call," listed

in 1899; the "Independent," from 1871 to 1872; the "City Guard," 1874; the "Eagle," 1876 to 1879; the "Old Well Local," 1878 to 1879; the "Connecticut Republican," 1880 to 1889; the "Mechanics' Journal," 1885 to 1893, and the "Norwalk Record," from 1886 to 1890, with which the name of John Rodemeyer, Jr., is significantly identified for at least a part of its career. There is at present published in Norwalk the "Golden Age," at first monthly, later bi-monthly, of which Mrs. Charles S. Abbe is director.

Other Fairfield County Newspapers

In 1910 a little paper entitled "The Shelton Booster" appeared in Shelton as a monthly. It was well printed on good paper on a job press, and contained some interesting editorials and bright sayings, and true to its name it was a booster for Shelton. The paper was financed by O. S. Freeman, a well-known newspaper man, who in 1925 is serving his seventh term as president of the Connecticut Editorial Association, and was distributed free during nearly two years, during which time it proved to the community the value of some kind of a local news dispenser and town booster.

The business increased rapidly in both advertising and job printing, but the publisher realizing that his health was on the wane sold the business to W. B. Noyes, a Harvard graduate. A man by the name of Peck became associated with Mr. Noyes, and the title was changed to the "Times." Later they moved the printing plant to Stratford, sending the papers up to Shelton by car, but the paper soon disappeared.

New Canaan, settled as early as 1700, first had a newspaper, according to the old lists, in 1868. It was

called the "New Canaan Era," and was published until 1871. Copies are rare, if they are in existence, and little seems to be known about it. It was followed, on January 20, 1877, by the "New Canaan Herald," which Charles B. Marchant started, and which ended its brief career in 1878. Copies of that also are hard to find.

The first newspaper with a history started in New Canaan was the "New Canaan Messenger," which for twenty years stood alone as a community publication. William W. Gillespie & Company, publishers of the "Stamford Advocate," established it in January, 1877, as a New Canaan edition of their newspaper. Frank E. Weed was the editor and general manager. Later in the year Weed associated with him Will W. Kirk, and they purchased the "Messenger." Shortly afterward Kirk bought out his partner, and remained the publisher of the paper until 1910. At different times in that year A. B. Bailey, J. Frank Benedict and G. E. Richter came into the ownership, and the latter conducted the paper until its consolidation with the "New Canaan Leader" in 1915. The "Leader" had been started two years earlier by Henry F. Harris, J. Frank MacLaughlin and Paul Lockwood, and after the union Henry F. Harris was editor. The "Messenger and Leader" continued for about three years, and ceased in 1917.

Meanwhile, three newspapers had been started in the town. The first and second, the "News," 1897 to 1898, and the "Fairfield County Republican," 1901 to 1902, have left little in the record, but the third was destined to be the only survivor for New Canaan, and one of the ablest weeklies in the State. It was the "New Canaan Advertiser," established in 1908. John E. Hersam was concerned in its foundation, and after a few years ac-

quired the entire ownership. He continues the paper today, serving well his sterling community, and contributing much to its reputation as "the next station to Heaven."

Greenwich's first newspaper was the "Greenwich Observer," which Keeler Brothers established in 1877. The first issue was on November 15, and the paper was a weekly. In the following April William M. Keeler became the sole proprietor, but he sold to B. F. Ashley in October, 1880, and he sold to John K. Mead in the following month. Mr. Mead was editor and proprietor till February, 1883, when the newspaper was consolidated with the "Greenwich Graphic."

The "Graphic" had been started in December, 1881, by Edwards Brothers. From then and after the consolidation with the "Observer" they conducted it until July, 1890, when Erwin Edwards bought out his brother's interest, and became sole proprietor. He carried on the newspaper until a second consolidation in 1915, which made the "News and Graphic."

The "Greenwich News" was established on February 2, 1888, by the Hon. R. Jay Walsh, with Charles H. Lee as editor. Judge Walsh sold in July, 1889, to Edwin H. Abrams, who removed it to his own building, published it for seventeen years and sold it, May 14, 1906, to Frederick W. Lyon. Mr. Lyon published the paper for nine years, greatly increased its size and circulation, and sold it in 1915 to the Greenwich Publishing Company, newly formed, which at the same time purchased the "Graphic" and combined the two as the "News and Graphic." Nelson E. Barton was the first editor under the new management, and was succeeded in 1917 by John Rodemeyer, who came after a long career on many

Connecticut newspapers, and with the honors of founding the Bald Head Club of America fresh upon him, to be its editor.

Norman Talcott, a newspaper man of long experience, founded the "Greenwich Press" in 1910. He associated with him a group of such men as George Barr Baker, Irving Bacheller, Richard Lloyd Jones, Lincoln Steffens, Ernest Thompson Seton, Gilman Hall and Julian Street. Mr. Talcott retired from the publication in 1916, and the next year Ralph Morrow was the editor. Miss Shirley Putnam became editor and manager in 1920, and conducted the "Press" with great success until her marriage in 1924. Miss Georgina B. Davids is the present editor. The Press Publishing Company is the publisher.

Bethel was a boom town in the decades immediately following its separation from Danbury in 1855, and within the next twenty years four newspapers were established there. In all it had five, none of them at present surviving. The first of them really belonging to Bethel was the "Bethel Press," begun June 26, 1874, by W. E. Mallory. He consolidated it with the "Danburian" of Danbury, which he had published, in May of the next year, but suspended the combination on July 3 following. On June 3, 1876, Mallory revived the "Press." He sold the paper in September to Albert A. Bensel, who was publisher of the "Georgetown Star," started in 1879. But Bensel evidently sold or discontinued the "Press" early in 1879.

For an issue of the "Bethel Ledger" (a paper started that year) for June 3, 1879, contained the announcement that John T. Pearce, whose name then appeared as publisher of the "Ledger," had purchased the

"Georgetown Star" from Mr. Bensel, and would combine it with the "Ledger." Evidently the "Press" was also a part of that combination. But on September 24 of that year Pearce had sold to Charles E. Hoyt & Company. On April of the next year Hoyt sold to George M. Cole, who wrote up the Bethel Publishing Company as proprietor. Albert A. Bensel bought the paper back in May of 1880. Charles E. Squires and George M. Cole appeared as editors and publishers. Mr. Cole remained in ownership, but revived the name Bethel Publishing Company, which continued till June 9, 1882, when the paper appeared in brand new form. It was the "Valley Ledger," and the publisher was John Rodemeyer, Jr. Mr. Cole said a good word in the paper for the young publisher who had come down from Canaan.

The "Ledger" ceased in 1883, and for ten years Bethel had no newspaper. In 1893 the "Bethel Eagle" was started. But the space had been filled during the lapse, and the "Eagle" failed after two years, only to be succeeded in 1895 by the "Bethel News," which survived only until 1898. The "Bethel Statesman," started in 1911, and conducted for a time by Edward H. Bulkeley, lasted for only four years.

The same A. A. Bensel who figured in Danbury and Bethel publications started the "Newtown Bee" in June, 1877. It has survived and most of the time has prospered ever since. Mr. Bensel kept it only a year, however, and sold it to John T. Pearce, also appearing in Bethel, who had been the editor. Mr. Pearce sold it after a year to A. H. Hawkins, who sold it back to Mr. Pearce in February, 1880. He afterward sold it, then repurchased it, but in 1881 gave up the struggle and sold it to Reuben H. Smith, who came down from

the "Springfield Republican." The Bee Publishing Company was incorporated, and by hard work Mr. Smith put the newspaper on its feet, conducting it until he sold in 1892 to his brothers Allison P. and Arthur J. Smith. The former is still with the paper as editor.

In 1880 the "Newtown Chronicle" was started by J. A. Maddigan, but lasted only two years.

D. Crosby Baxter was the founder of the "Ridgefield Press," January 13, 1875. He called his first product "Baxter's Monthly," and it was a diminutive publication with the motto, "tall oaks from little acorns grow." He enlarged it repeatedly until it was of newspaper size, then he made it weekly and called it the "Ridgefield Press." It is still published as a weekly, for some years past under the name of the Press Publishing Company. D. Crosby Baxter, its original editor, remained with it for many years, to be succeeded by W. A. White, in his day one of the able newspaper men of Fairfield county. D. W. Workman has been editor for several years past.

Darien saw a brief effort at publication in the years following 1895, when the "Darien Herald" was started. It lasted only until 1898. Meanwhile the "Darien Review" was begun in 1896. Adelaide H. Bass was editor and publisher in 1902, and John W. Bass in 1911. For two years following 1921 A. C. Hatch successfully conducted the weekly, but early in 1923 he sold to Alfred N. Phillips, Jr., then mayor of Stamford, who still conducts the newspaper.

There were three newspapers in Fairfield between 1897 and 1918, but all have disappeared. The "Record" ran from 1897 to 1900, the "Times" from 1905 to 1906, and the "Review" from 1912 to 1918.

Southport had the "Chronicle," its most enduring publication, from 1867 to 1905. For most of its career it was a weekly, but for its last three years it was a semi-monthly. William T. Armstrong was its publisher. There was also the "Southport Times" from 1878 to 1881, an excellent weekly conducted by Henry A. Van Dalsem as managing editor. There was an "Advertiser" from 1889 to 1890, an "Echo" from 1878 to 1879, and a "Church Record" from 1885 to 1888.

The newspaper of longest establishment in Westport, and one of the strong weeklies of that part of the county, is the "Westporter-Herald," founded by John S. Jones as the "Westporter" in 1876, and for many years past published by his son, Willis S. Jones. It was the first paper to be printed in Westport, though previous ones had been published for circulation in the town. The earliest of these was the ancient "Saugatuck Journal," edited by S. W. Benedict for about three years after 1828, and sold to Albert Hanford, who combined it with the "Fairfield County Republican," printed in Norwalk, and which was soon discontinued.

Previous to the establishment of the "Westporter," Mr. Jones had been associated with others for a short time in the publication of the "Westport Advertiser," a mercantile association paper.

The "Westport Standard," tri-weekly, was started in 1923 by the Standard Company, of which John D. Lawson was president.

The "Wilton Star," by the Star Publishing Company, with weekly and monthly editions, was started in 1919 in Wilton, and is still published.

Windham County

Windham is a county of comparatively few but select newspapers, mostly weekly. It has never had more than three dailies; it has only one now. Yet the beginnings of its publications go well back into the early period, to March 2, 1791, when John Byrne started the weekly "Phenix, or Windham Herald." With the issue of April 19, 1798, the title was shortened to "Windham Herald," and so continued. Beginning with March 29, 1811, John Byrne took his son Samuel H. Byrne into partnership with him, as J. Byrne and Son. The paper was discontinued with the issue of March 30, 1815, but was revived, with a continuation of the numbering, by Samuel Green on July 27, 1815. Starting with the issue of October 19, 1815, the imprint is "printed and published by Benjamin G. Willett for Samuel Green." According to a later imprint, Benjamin G. Willett was in business for himself for a time in June, 1816, but from June 20 to September 19, 1816, at which date it was discontinued, the paper was published for Samuel Green, without mention of Willett.

On March 6 of the following year, 1817, Samuel Webb established another weekly, the "Windham Register." It seems not to have continued more than two years, and the last issue located is of April 10, 1817. In her "History of Windham County" Miss Ellen D. Larned tells us that Henry Webb started on July 1, 1820, the "Independent Observer and County Advertiser," in whose production and distribution Samuel Webb and Horatio Webb were interested. The "Observer," she says, surpassed the waning "Herald" in size and general appearance. According to another

authority, the "Herald" had ceased in 1816, so perhaps it was the "Register" to which she referred. As to the continuance of the "Observer" there is no definite record, and Miss Larned is said to be the only authority for its existence.

The next three decades in Windham county journalism are, as far as the records go, rather misty. The next definite establishment was in that part of Windham which by then had become Willimantic, the "Willimantic Journal" in 1848. It was the same under a changed name as the "Public Medium," started in 1847 by John Evans. In a few years the "Journal" was found in the hands of William L. Weaver, who had a conspicuously brilliant literary career in the town and county. From his hands the paper passed to Curtis, later of the "Norwich Bulletin," and soon after that to A. Walton Pierson. W. J. Barber was publishing it in 1871, when he sold it to Henry L. Hall, who was editor of the newspaper from then until 1886, and gave it one of its longest and ablest administrations. In his time the publication name was successively Hall & French, Hall & Bill and the Hall & Bill Printing Company. Mr. Hall was an able editor, a born orator, a man of substance and influence in Willimantic and beyond, a large figure in Windham journalism. The surviving partner, Arthur I. Bill, carried on the business after Mr. Hall's death, and one of the ablest of the paper's later editors was George E. Hinman, who later became a lawyer and had grown in 1924 into a judge of the Superior Court, and the following year was named for the supreme bench. The subscription list of the "Journal" was sold to a Putnam newspaper, and in 1911 it was discontinued.

John A. McDonald, a graduate of the "Windham County Transcript," was the prime factor in the starting of the "Willimantic Chronicle," which began as a weekly in 1877. Mr. McDonald remained with the paper until, under his guidance, it grew to be a daily in 1891. He had incorporated the Chronicle Publishing Company on starting the paper, and later associated with him Fayette Safford, who continued the management after Mr. McDonald's death in 1905. In 1923 John A. Keeffe, who had been city editor, became editor and the leading figure in the publication of the paper. The "Willimantic Chronicle" was the outgrowth of the "Willimantic Enterprise," which had been started the same year by N. W. Leavitt and others, but was acquired by Mr. McDonald and continued under the changed name.

Allen B. Lincoln started the "Connecticut Home" in Willimantic in 1886, and made it vigorously from the first an expression of his conviction that temperance ought to be the practice of every citizen, and prohibition of the liquor traffic the law of the land. It was forty-three years before Mr. Lincoln saw the fulfillment of his dream, but for nine of those years, three in Willimantic and six in Hartford, he made his newspaper a positive force for the dissemination of his beliefs and the advancement of the cause. For a time A. E. Knox, long identified with the "Woodbury Reporter," was business manager of the paper. "Not since the dark days of oppression and wrong," wrote Nathan W. Kennedy in the later "History of Windham County," "has any person, paper or periodical made a more manly fight against odds."

There were some sporadic ventures before and after

this. In 1881 W. C. Crandall had started the "Willimantic Record." It had a career of only a few months. In 1887 J. Harry Foster was the principal mover in the start of the "Willimantic Daily News." That lasted only four months.

Newspapers of Putnam and Danielson

Putnam, though the older community, had to content itself, up to 1872, with a column or a page in the "Windham County Transcript," founded twenty-four years earlier. In 1872 the "Putnam Patriot" was founded by Everett Stone, son of that greater John Quincy Adams Stone, who had long been associated with the Danielson newspaper. It took over from the "Transcript" its Putnam list of subscriptions. Yet the "Patriot" had a hard struggle in its first few years, and once its office was wrecked by fire. It period of real prosperity did not begin till its sale, in 1882, to A. W. MacDonald, who had come to the town from Brooklyn, N. Y. He came in just in time to get the full effect of the fire, which wrecked the paper's equipment and the block in which it was published. But Mr. MacDonald courageously undertook the task of reconstruction. He soon associated with him L. O. Williams, and as MacDonald & Williams the firm went forward, by steady and hard work, to prosperity. A. S. MacDonald succeeded his father on the latter's death several years later, but Mr. Williams remained with the paper until about 1918, when ill health forced him to retire. The newspaper was purchased in 1919 by G. Lawrence Perkins and J. J. Whitehead, who continue the publication.

In 1890 the subject of making Putnam a city was strongly urged, and the publishers of some newspapers

thought it would stand a daily. Nathan W. Kennedy, a Dayville young man who had established a considerable reputation as an all-around genius, had started in 1872 at Danielson the "Dayville Sunbeam," as brilliant as its name. It had grown so rapidly that the publisher of the "Transcript," on one of whose presses it was printed, told him to move. He moved it to Putnam, where it became the "Windham County Standard." It had flourished, and Mr. Kennedy felt the urge for more ambitious journalism. He made it a daily in 1890. Less than two years sufficed to tell him that the town was not ready for a daily. He returned to the weekly field, and did well. Soon after, however, he sold to William and Lyman Gould, and they in turn to Horace Wilder of Massachusetts, who sold to George L. Padgett, the present owner, who in his early days was associated with the late President Harding in newspaper work at Marion, Ohio. The paper has for some years been published as the "Windham County Observer."

There was a brief effort at publication of the "Windham County News" in 1875 to 1877.

The original and historic paper of northeastern Connecticut, however, was, is and long promises to be the "Windham County Transcript." Founded when Danielson was Dayville in 1848 on the early ruins of the "New England Arena" which Edwin B. Carter had started four years earlier, it became at once the vehicle of the genius of J. Q. A. Stone, who came to its editorial control after a swift series of ownerships and editorships in its first eleven years. It was still the "Windham County Telegraph" up to some time in the 'fifties. Mr. Stone was an able writer, a good newspaper maker, and he had resources. He built up the paper and with it the

community. His control was uninterrupted up to his death in 1897, after which his son Charles D. Stone conducted the paper, enlarging it and improving it in many ways. In 1899 he sold it to a partnership consisting of Charles H. Burroughs, Fred C. Burroughs, and Burdette C. Hopkins. Later, in 1915, the Transcript Company was formed, and Mr. Hopkins was for some time business manager. Recent editors of the Transcript have been Judge James M. Tucker, Morgan F. Davy, Albert F. Ralston and Arthur W. Eddy.

For a time in his career J. Q. A. Stone had a sharp journalistic tussle with Major John Kies, who established the "Weekly Herald" in Danielson in 1870, and published it for five years. Kies was a Democrat and an able antagonist in many ways, and there was a lively time in town while the show lasted. But Kies was too rampant to survive. His "Herald" was succeeded by the "Democratic Sentinel," but for only three years. There was from 1870 to 1876 the "Windham County Press," but that made less of an impression. For some years after 1885 there was in Danielson a poultry magazine, the "New England Fancier."

Since 1880 Charles F. Burgess, lately assisted by his sons Foster L. and Howard F. Burgess, has conducted, first in Plainfield and later from a well-fitted printing office in Moosup, one of the important publication businesses of the county. He established, first the "Railway Journal," then the "Plainfield Journal," then the "Jewett City Press," which he later sold. He now prints both the "Moosup Journal" and the "Plainfield Journal."

There have been a number of vagrant publications at different times about the county, now with difficulty

identified. Brooklyn had its "Mirror" from 1884 to 1886. Central Village had a "Trial" from 1887 to 1888. Plainfield had a "Messenger" from 1881 to 1890, which printed an edition for Sterling.

Litchfield County

In 1784 the town of Litchfield had a population somewhat in excess of 3,000, was the county seat and far and away the most important political and educational and industrial center in the county. That year two important events happened there—the founding of the first law school in America by Tapping Reeve, and the establishment of the county's first newspaper by Thomas Collier.

That was the "Weekly Monitor." It was a paper ten by sixteen inches in size, printed on the coarse, thick, bluish paper common at the time. Its seal was a group of rude figures surrounding a plow, above which streamed the rays of a full-orbed rising sun—symbolical of the rising future of the town, perhaps. Its motto was "Venerate the Plow." Only a few of the little old sheets are in existence now.

The "Monitor" was Federalist in politics, and vigorous in its support of local enterprises. It increased the business and prosperity of the town, for its editor took the initiative in establishing a post office in Litchfield, and arranging for a weekly post between Litchfield and Hartford, and one each two weeks between Litchfield and New York. He also published several books, among them the first volume of law reports ever printed in the United States. Mr. Collier moved to Binghamton, New York, in 1808, and died in 1844. Somehow the "Monitor" had not been a success. Perhaps the competition

of a rival, started in 1805, had been in part responsible for its discontinuance in 1806.

This was the "Witness," by Sellick Osborne. It had a short life and a merry one. Taking the Democratic side, its editor plunged into politics so vigorously and imprudently that in less than two years he had accumulated a bill for slander and libel suits that must have looked large by the standards of those times. Glorying in his shame, he published it thus:

> Fine and costs in suit against J. Deming, Esq., $346.46.
> For publishing case of Tallmadge & Wolcott vs. General Hart, with comments thereon, fine and costs $605.98.
> For slandering Thomas Collier (his brother editor), $522.00.

There was mention of imprisonment in addition.

The "Witness" was discontinued in 1807. Sellick Osborne, its editor, evidently was a man of ability, and a volume of his poems, printed in Litchfield, is among the town's relics.

The "Gazette," founded in 1808, gave place in 1809 to the "Litchfield Journal," which after a course of ten years, not greatly noticed in the records, became the "Republican" in 1819. Again in 1821 the title changed, and the "Mercury" briefly appeared. But in 1822 the "Eagle" gave its first scream, and Litchfield, it seemed, had a real newspaper. It had the field to itself only for a little time, however, for Henry Adams started the "Litchfield County Post" in 1825. Very soon he changed the name to the "Enquirer," and the fight was on. The "Eagle" was Democratic; the "Enquirer" Whig, and Editor Adams waged so lusty a strife that in a year he had made the "Eagle" take its flight to New Haven.

The "Enquirer" has been published continuously as

a weekly from that time till now, under various ownerships and some very distinguished editors. Under Henry Adams it was a five-column folio. He was a notably able journalist, and in his hands the paper had at once a state-wide influence. His brilliant career was terminated in 1843 by drowning. He was succeeded by his brother Charles—"Deacon" Adams, long prominent in the social and religious life of Litchfield. He was a brilliant writer, but his stay with the "Enquirer" was short. In 1845 Payne Kenyon Kilbourne, after wide experience as writer, editor and printer, returned to his native town of Litchfield and purchased the "Enquirer" from Charles Adams. Under him the paper prospered, and in 1846 came out enlarged to six columns, with a new headline and dress of type. Mr. Kilbourne's literary contributions to it gave it great strength and influence. But ill health compelled him to sell to H. W. Hyatt in March, 1853.

Mr. Hyatt also enlarged and improved the paper, but in September, 1856, sold to Edward C. Goodwin, who kept the property only a year and a half, and on May 1, 1858, Charles Adams again came into control, having associated with him Henry E. B. Betts. October 13, 1859, James Humphrey, Jr., bought the "Enquirer." Mr. Humphrey, a practical and progressive printer, enlarged and improved the plant and made an enviable record in his six years' control. Early in 1865 the ownership passed to Wing & Shumway, the latter being Alexander B. Shumway, who had been foreman under Mr. Humphrey. About a year later George A. Hickox succeeded Wing as editor, in another year became sole owner, and then began a notable period of twenty-five years in the history of the "Enquirer."

Mr. Hickox was a high-minded citizen, an able writer and a generally superior newspaper manager. He made the "Enquirer" a radical Republican paper, especially taking Congress's side in the strife following 1866 over the impeachment of President Andrew Johnson. He was a hard and effective fighter, a red-blooded man in politics. He was a power still more in the affairs of Litchfield, and made his paper a force in urging the welfare and progress of the town. In his time the "Enquirer" became widely known and liberally copied.

In 1891 C. R. Duffie, Jr., purchased the "Enquirer," and conducted it successfully until 1894, when George C. Woodruff, son of Judge George M. Woodruff, after several years in the ministry, decided to take up journalism, returned to Litchfield and bought the paper. For over thirty years he has maintained the standard of the journal, and kept it in the forefront of Connecticut newspaperdom. Relaxing somewhat in recent years, he a few years ago turned the business management of the paper over to S. Carl Fischer, who has adopted a vigorous policy of improvement and expansion. In this time the blanket sheet of four pages has been changed to six-column, eight-page form, and modern typesetting and printing machinery installed.

Major Woodruff—he was on the staff of Governor Everett J. Lake in 1921 and 1922—is one of the well-known newspaper men of the State, a writer of ability and a citizen of distinction. In 1924 he climaxed a career of many travels by a trip around the world, and wrote his impressions in a book "O'er Land and Sea."

The "Enquirer" in its time has had several rivals, all brief and fading. The "Litchfield Democrat," by Melzar Gardner of Hartford, joined issue with it in

1833, but gave up in less than a year. The "Sun," another Democratic antagonist, appeared in 1833 under John M. Baldwin, who sold it in the following year to S. C. Hayes of New Haven. It was discontinued in 1839. The "Mercury" in 1840, turning to the "Democratic Watchman" in 1842, followed but had gone by 1844. The "Republican" was begun by J. H. Averill in New Milford in 1845, was transferred to Litchfield in 1846, and run for ten years there, when it was moved to Falls Village. The field was clear for ten years after that, but there was bound to be an opposition paper, and in 1865 George H. Baldwin started the "Sentinel," which was run as a vigorous Democratic paper for ten years and then bought by George A. Hickox of the "Enquirer" and discontinued. The latest attempt was by Frederick W. Cone, who in 1886 started the "Star," a bi-weekly, but gave it up in 1892.

Newspapers of Winsted

Winsted's earliest newspaper appeared in 1853 under the pretentious title of "Mountain County Herald." It was a six-column folio, and Thomas M. Clarke and Stephen A. Hubbard were the publishers. The firm lasted only eight months as Hubbard & Clarke, for in February, 1854, Mr. Clarke went to Bridgeport to be editor of the newly founded "Bridgeport Leader." About that time, too, the name of the paper was simplified to the "Winsted Herald," under which name, as a weekly, it is published today.

When Thomas M. Clarke withdrew, Edmund C. Stedman, then a young and promising journalist, later to be famous as the "banker-poet," came to take his place, and for fourteen months the firm was Hubbard

& Stedman. Then Mr. Clarke returned to Winsted and took his former place, and Mr. Stedman sought other fields, the firm becoming again Hubbard & Clarke until July, 1855. Then Mr. Hubbard withdrew, and for the following ten years Mr. Clarke was sole owner and editor. In 1865 he sold to the Winsted Printing Company. The man who came to Mr. Clarke's place was Theodore F. Vaill of Litchfield, just back from the Civil War. He died in 1875, and was succeeded by his brother, J. H. Vaill, who had been business manager for several years. Then began a regime which lasted for several years, and was one of the most profitable periods in the earlier history of the paper. Mr. Vaill was a newspaper manager of ability, and ranked high in the esteem of his contemporaries.

Meanwhile the "Winsted Press" had been established in 1873 by Henry A. Bills, politician, and Lucien V. Pinney, journeyman printer. The combination lasted from July 5, when the paper started, only until the following October, when Pinney brought out Bills, and continued it as editor and publisher. It was a Democratic sheet at first, but Pinney went astray in the seductive paths of Greenbackism in 1874, and ran for Secretary of State on the Greenback ticket in 1876. The "Press" had an uncertain career for ten years longer, and ceased in 1887.

The "Winsted News" was a third venture in Winsted publication, made by the same Henry A. Bills after he parted company with Pinney. It was established in 1874, and presently came to be the leading Democratic paper of the county. In 1880 it was purchased by W. A. McArthur, formerly editor and proprietor of the Ludlow, Vermont, "Tribune." Later there was a

change in the ownership, and at the time of its close in 1888 it was known as the "Times and News."

Such vacuum as was caused by the suspension of the "Times and News" was immediately filled. That same year Nathaniel B. Stevens, J. H. Van Keuren and E. F. Hubler organized the Citizen Printing Company, with Mr. Stevens as president and Mr. Hubler as business manager, and started the printing of the "Winsted Citizen," daily, the "Litchfield County Leader," weekly, and the "Torrington Daily News." Louis T. Stone, who in the days since then has made Winsted famous in the national field by his remarkable news specials, was editor of the "Citizen," and remains in that position to the present time. Mr. Stevens was editor of the "Leader" and J. C. Late was editor of the Torrington daily. That lasted only until 1890, for the "Register" of Torrington started its daily in 1889. In 1888 the Dowd Printing Company of Winsted issued the "Arch Deaconry Record," quarterly, the "Philatelic Press" and the "People's Home Journal," monthly, and the "Wethersfield Weekly Farmer." J. H. Vaill was still publisher of the "Herald."

Edward M. Platt became editor of the "Leader" in 1906, for Mr. Stevens had sold his majority interest to Irving E. Manchester, who continued in control of the "Citizen" until 1920, when he sold to Robert S. Hulbert, and retired. Since then Mr. Hulbert has been in control of the newspapers.

Meanwhile the long regime of J. H. Vaill with the "Herald" ceased, and that weekly passed to the ownership of the Citizen Company in 1905, Colonel S. B. Horne becoming editor, a position which he has since held.

Mr. Manchester, who in association with George F. Drake had managed the publications for fourteen years before he sold in 1920, in 1923 joined with Clarence Durand and Robert E. A. Doherty in the foundation of the "Winsted Times," weekly, which they have published since that date.

Among the fugitive publications in Winsted in the later period have been the "Afternoon Mail," mentioned in 1884; the "Argus," from 1875 to 1884, and the "Winsted Advertiser," 1886 to 1888.

Newspapers of Torrington

In the days when Torrington was Wolcottville—previous to 1881—the town's first newspaper was started. That was when the church and community and industrial life of the town centered in the village at the junction of two streams in the northwest section of the town, which got its name from Governor Oliver Wolcott. In that village, in 1873, Henry Bolton established the "Wolcottville Register." It was a live weekly from the start, adapted to the needs of its growing and progressive community. But Mr. Bolton had a good chance to sell in 1876, and C. James took the newspaper. In 1881 its name was changed to the "Torrington Register" to conform to the changed name of the community. The year before that the newspaper had been purchased by E. A. Hayes of the "Southington Phoenix," and in December, 1882, Henry M. White of the Union Hardware Company bought a half interest. Soon after that he became sole owner of the property, and gave his entire attention to the publication. It was he who started the daily edition in 1889, and though without previous newspaper experience, he greatly de-

veloped and improved the newspaper in his sixteen years with it, which ended in 1898.

In that year the Torrington Printing Company was formed, with Orsamus R. Fyler, president; Thomas W. Bryant, vice president; Judge Gideon H. Welch, secretary and Morgan Bryan treasurer and general manager. Mr. Fyler remained president to 1908. In 1910 Edward H. Hotchkiss was made president, and continues to the present. George W. Peterson came to the newspaper as editor in 1906, and continues as general manager.

William C. Pond started the "Torrington Evening Item" in May, 1895. Though his paper was a rival of the "Register," there was only the friendliest feeling between Mr. White and him, for Pond had graduated from the "Register." But it required only two years to show Mr. Pond that there was not room in Torrington at that time for two evening papers, and he gave up in 1897.

There was a similar undertaking in 1916, when S. Carl Fischer, now manager of the "Litchfield Enquirer" and publisher of the "Watertown News" and "Woodbury Reporter," J. W. and E. Case Connell started the "Evening News" in Torrington. Their venture was over in about a year. The only other fugitive recorded was the "Telegram," weekly, published in 1891 and 1892.

Other Litchfield County Newspapers

The first number of the "Woodbury Reporter" was printed in a private house on North Main Street on the tenth day of January, 1877. The editor and publisher was Arthur E. Knox, 21 years of age, married, possessed of a meager common school education, an old

Star press, a few pounds of type, no money, and a tremendous desire to be a printer. After two weeks' hard labor the type for the first issue was ready for the press. In 1885 Editor Knox sold out to Rev. W. W. Wisegarver of Pennsylvania, and spent five years as manager or foreman of other printing plants, the "Connecticut Home," "Waterbury Republican" Job department, and editor and proprietor of the "Groton Review." He returned to the "Reporter" in 1893, but sold in 1905, going to Los Angeles, Cal., whence returning on leave in 1906, he repurchased and conducted it until 1923, when S. Carl Fischer of Litchfield bought the paper, of which O. S. Freeman is now editor and business manager. Mr. Knox had been with "The Reporter" for over 40 years.

The first newspaper published in New Milford was the "Republican," in 1845, in charge of J. K. Averill, which was moved to Litchfield in 1846.

Bailey (the Danbury News man) and Donovan established the "New Milford Journal" in 1872, which was printed in Danbury. The local editor was Emerson Addis, for many years afterwards the editor of the "Standard" at Brewster, N. Y. In 1873 the paper was sold to J. R. Johnson, the outside being printed in Danbury and the inside in New Milford. In 1874, the "Journal" passed into the hand of M. L. Delavan, and was printed and published by him, the name being changed to the "Housatonic Ray." In 1882, it was sold to Joshua A. Bolles (of the Groton family of Bolleses, one of whom was connected with the "Courant" and went from it to the "Hartford Times") and Franklin H. Giddings (now Professor Giddings of Columbia, well-known economist). Later they combined it with the

"Gazette," which was then being conducted by Robert Erwin. The "Gazette" had first been established as the "Courier" by George A. Hale, and later sold to Mr. Erwin.

The "Gazette" was conducted by Mr. Bolles until his death in 1905. His son was a recent employee of the "Courant," doing Sunday specials, and his work is now with the Radio Relay outfit. The "Gazette" was bought by Major Frank Wells of Brewster in 1905, and conducted by Philip Wells, his nephew until his death in 1919.

In 1914, the "New Milford Times" was established by a stock company, at the head of which were Charles Seiple and Charles Bently. The latter dropped out in 1915, and Seiple in 1917. E. Henderson ran the "Times" for about a year, and in June, 1918, A. C. Worley, who had been with the "Gazette" for seventeen years, took charge, purchasing a control of the company. In March, 1920, the "Times" bought out the "Gazette," combining the two and retaining the best features of both.

In 1914 Watertown, a thriving village in southern Litchfield County, saw the need for a local paper of some kind, and accordingly the Business Men's Association, then active and of which Dr. Charles W. Jackson was president, undertook to establish a monthly publication, which was called the "Watertown News." It succumbed, but in October, 1921, O. S. Freeman revived it and is now editing it, acting also as managing editor of the "Woodbury Reporter," in which office the mechanical department of "The News" is to be found.

The oldest of the remaining Litchfield County newspapers is undoubtedly the "Sharon Rural Gazette,"

founded in that town by E. Hopkins, March 31, 1800. Only a few of its issues are to be found now, and the last one located would indicate that its publication ceased soon after July 13, 1801.

The "Connecticut Western News," so long associated with North Canaan, was really founded in Salisbury in 1871 by Joseph L. Pease, who moved it in 1876 to Canaan (North Canaan), and it was then and there that the remarkable newspaper career of John Rodemeyer, who then was "Jr.," began. He was with the paper, beginning as "printer's devil," from 1876 to 1882, and again, after wanderings in Bethel, in Norwalk, in New Haven, in Hartford and elsewhere, from 1910 to 1917. Mr. Pease conducted it till his death in 1878, when it was sold by the late Judge Alberto T. Roraback as administrator to Colonel J. B. Hardenbergh, who in turn sold it in 1883 to Samuel C. Beckley. He conducted it with much success for twenty-four years, selling it in 1907 to the Canaan Printing Company, which has since owned it, and of which J. Henry Roraback is president. Mr. Rodemeyer was editor from 1910 to 1917, and since then the paper has been in charge of A. W. Krouse.

The "Thomaston Express" was started in April, 1880, by three young men with a capital of $5,000. That seems not to have been sufficient, and three months later they sold the paper to C. James, who had just sold the "Wolcottville Register." Mr. James took possession on October 12, 1880, and conducted it for several years. J. H. Roberts was editor and publisher from about 1900 to 1911. In 1916 the Thomaston Express, Inc., was publisher, which was later changed to the Thomaston Printing Company. E. W. Small was editor in 1920,

and since 1922 Frank H. Mattoon has managed the paper.

The "Thomaston Weekly News," started by C. R. Smith & Company in 1881, ran until 1882. There was a "Terryville Eagle" in 1884 to 1886.

The "New Hartford Tribune" was founded in 1880 by Henry R. Jones, a very able writer and newspaper man, and had a large circulation through southeastern Litchfield and western Hartford county. After Mr. Jones's death the paper was continued for some years by his son, H. Roger Jones, who sold it in 1911 to Arthur S. Barnes of the "Bristol Press." For some years after that it was issued as an edition of the "Press."

Middlesex County

The same Green family whose hand is seen in the beginnings of publication of all the oldest journals of Connecticut appeared in Middletown in 1785, when Thomas Green, with Moses Woodward, opened a printing office and began the publication of a weekly newspaper, the "Middlesex Gazette." Its first issue was on November 8, 1785, and it was continued weekly, with fair regularity, till 1834.

The "Gazette" was not without vicissitudes, and the familiar swift changes in ownership. Thomas Green, having started the publication, withdrew in a short time. Mr. Woodward went on alone until 1797, then sold to Tertius Dunning. Meanwhile, there had been some changes in title. The paper was called at first the "Middlesex Gazette, or Federal Adviser," but it seems to have been shortened to the common title about 1792.

As T. and T. B. Dunning we find the firm from 1800 to 1810, then T. Dunning again to his death in 1823.

His son, Charles Dunning, continued it for a time, but sold in 1824 to Epaphras and Horace Clark. They sold it in July, 1828 to Theodore N. Parmelee and Edwin T. Greenfield. About the middle of 1829, Mr. Greenfield was sole possessor, then he sold the whole thing back to Mr. Parmelee, who kept it to 1832 and sold it to Edwin Hunt. The last owner was John Longking, Jr., in whose hands it ceased in 1834.

The only other newspaper during the progress of the "Gazette" was the "Connecticut Spectator," which Loomis & Richards (Simeon L. Loomis and Seth Richards) published from April 20, 1814 to March 29, 1815. Seth Richards took over the publication then, but it ran for only two months longer.

Middletown could not be without a newspaper, and the "New England Advocate's" birth followed hard on the death of the "Gazette" in 1834. It was started by George F. Olmstead, but published only about two years.

The most abiding of Middletown's publications began when in 1823 William D. Starr and William H. Niles, as the firm of Starr & Niles, started the "American Sentinel." Mr. Starr became sole proprietor in 1827. In January, 1833, the "Witness" was started by H. W. Green. After thirty-two numbers the publications were, on August 14, 1833, united as the "Sentinel and Witness." Soon after that Mr. Niles withdrew, and Mr. Starr was sole proprietor up to March 25, 1851. Then his son, William J. Starr, was taken into partnership, under the firm name of Starr & Son. William H. Dunham also came into the firm some time that year, but withdrew in October. The name W. D. Starr & Company was continued till November 14, 1854, however,

and then became Starr & Son until the death of the senior Starr in 1855. His sons William J. and Samuel J. Starr continued the newspaper twelve years to June 1, 1867, when they sold to Townsend P. Abel, who changed the name of it to "Our Country." That break was only for a little more than a year, for on September 19, 1868, Samuel J. Starr rebought the paper and restored the honored name "Sentinel and Witness."

The Starr management continued with the paper for ten years without a break. Then, in January, 1878, Robert G. Pike bought the "Sentinel and Witness," only to sell it in June to Ernest King & Son, who continued the old weekly for twenty years as a Saturday publication. Mr. King, the elder, was an English journalist of thorough training and high ability, a hard worker and a good business manager. He was able to sense the opportunity there was in Middletown for the success of a properly conducted daily newspaper. In 1882 he and his sons started one, giving to it the characteristically British name of the "Penny Press." It was sold for less than that, however, namely a plain American cent a copy, for thirty-five years of its existence.

After Mr. King's death his two sons, Claude B. and Gerald E. King carried on the daily with the business acumen of their father, but in 1898 they saw fit to drop the weekly "Sentinel and Witness." The "Penny Press" grew in circulation and prosperity, but in 1919 the brothers yielded to the temptation of a good offer, and sold to a group representing varied interests. Burr E. Stevens and Elmer S. Hubbell were Bridgeport men who had been with the "Post-Telegram" combination. With them joined Richard H. Bunce representing a block of Middletown capital, and forming the Press

Publishing Company and changing the name of the paper to the "Middletown Press," they took up the publication with Messrs. Stevens and Burr as editors and managers.

In 1876 there was an effort to maintain a daily paper on the "Sentinel and Witness" prestige, but it was short-lived. In the second period of Starr ownership, while Samuel J. Starr was in control, he started the "Daily Sentinel." His first issue was on January 2, and his last on June 10. It was the third effort of the sort that had met a like fate.

Previous to their acquisition of the "Sentinel and Witness," Ernest King & Son had started the "Monitor," a weekly. This was on March 16, 1878. In June of that year they purchased the established newspaper, and the "Monitor" was merged in the "Sentinel and Witness."

Abner Newton started the "Constitution," weekly, in January, 1838. In July, nine years later, he made the first attempt ever made in Middletown to a run a daily paper, using the same name. It lasted only a few days. Mr. Newton went on with the weekly, and in 1856 took his son, Abner, Jr., into partnership. The senior Newton died on May 28, 1871, and his son continued the paper. He in turn made, in 1872, a venture with the "Daily Constitution." It continued until a few days before Mr. Newton's death in August, 1876. In the following March Charles W. Church purchased the weekly "Constitution," and continued with it until 1888. The following year Frank J. Starr was publisher, but the publication expired in 1890.

The "Daily News" was the second attempt of the sort in Middletown, being started by J. N. Phelps & Company in October, 1850. They lasted five months, and

resigned their task to W. B. Casey & Company. The paper itself lasted only until October, 1851. From the same office, possibly by the same publishers, was immediately begun the "News and Advertiser." It was independent until July, 1852, when it became Whig, and supported General Scott for President. It ceased after a few years.

There seems to have been a period of nearly ten years when no new newspaper children were born in Middletown. At least daily publication was abandoned from 1876 to 1883. In that year C. E. Woodruff started the "Daily Herald," which continued, under varying fortunes, until 1896. He formed the Woodruff Publishing Company on November 1, 1883. In 1884 it was the Middletown Publishing Company, F. H. Alford was president, and that arrangement continued as long as the paper did. The "Herald" was supposed to be a Republican paper for most of its time, but in its closing year it became Democratic in the hope, a competitor unkindly put it, of resuscitation.

When the "Constitution" ceased in 1890 Frank J. Starr, who had been its publisher in its closing years, essayed to give Middletown a Sunday newspaper. His "Sunday Morning Call," sounded in 1890, seems not to have been heard more than a year.

A "State Temperance Journal" was credited to Middletown from 1866 to 1880. In 1891 and 1892 Murray Closson presented the "Youth's Palladium." It was succeeded by his "Republic" in 1893, which became the "New Republic" in 1894 to 1898, and then ceased. The "Middlesex News" was published from the same office by C. L. Howard in 1896.

For some time previous to 1892 the Republicans of

Middletown and vicinity had chafed under the lack of a daily newspaper to represent adequately their political convictions, and at length their complaint so appealed to Edward F. Bigelow, who had a large printing plant in Portland, just across the river, that after a careful canvass of the business men of Middletown, whose results satisfied him, he started, on April 24, 1893, the "Middletown Tribune," daily. A plant for the publication had been established on Center street in Middletown, and Mr. Bigelow for a time took active charge as editor and publisher. The "Tribune" appeared to prosper, grew in size to meet an apparent demand, and after the going of its only Republican rival, the "Herald," over to the Democrats, was able to stand as the only Republican newspaper in Middlesex County.

For something over three years Mr. Bigelow owned and controlled the "Tribune," but later found that more capital was needed, and was willing that others should furnish it. A stock company was formed, and acquired the habit of placing the paper in charge of another editor and publisher, so that Mr. Bigelow was able to withdraw. In 1897 George G. McLean was the publisher, and following him Merrill & Bailey took charge, the former having been editor under Mr. Bigelow. Charles A. Kirtland of Deep River was editor for a year, and following him Charles E. Perkins came down from the "Hartford Times" as editor and publisher for three years, operating under a stock company of which A. M. Wright of Essex, Charles E. Chapman of Westbrook and E. P. Putnam of Middletown were the officers.

In January of 1905 came a change in ownership. Everett G. Hill, who had for four years previous been managing editor of the "New London Telegraph" under

Theodore Bodenwein's ownership, acquired the controlling portion of the stock and became treasurer of the company, editor and publisher of the "Tribune." The plant was poorly equipped, the competition was keen, the advertising patronage limited and the town had been bled of all the capital it proposed to invest in newspapers just then. Under those conditions, the "Middletown Tribune" "just naturally" died in July of 1906.

The apparent demand for a Republican daily in Middletown had not disappeared, however, which may account for the fact that two years after the "Tribune's" demise appeared the "Middletown Sun," evening. It was published by the Middletown Printing Company, of which Judge W. U. Pearne was president, E. C. Deland was vice-president, E. M. Allender was secretary and T. McDonough Russell bore the significant title of treasurer. Messrs. Allender and Deland managed the paper. A new building and plant were erected by Mr. Russell on Crescent Street, and there the paper was published until it ceased in 1914. At the finish the officers of the company, with the exception of Mr. Deland, remained the same, but Mr. Allender had returned to New Haven some time before the paper was discontinued.

Other Middlesex County Newspapers

The oldest newspaper in the county outside of Middletown, as well as the first to be founded, is the "Connecticut Valley Advertiser," published weekly since 1869 in the village of Moodus, town of East Haddam, where, in spite of any reputation to the contrary, it is the most important "noise." It was founded by E. Emory Johnson, who conducted it four years and then sold it to Joseph E. Selden, an old resident of Moodus. Mr. Selden

continued it until about 1890, when it was sold to G. P. Lecrenier, who has since maintained it as the important newspaper of his section.

Francis Sheldon started the "New Era" in Chester in April, 1874, as a monthly. Two years later he changed it to a weekly. In 1879 he removed the publication to Deep River, the most important portion of the town of Saybrook, and it has been issued there ever since. He conducted the newspaper for several years through vicissitudes, but had brought it to enlargement and prosperity when his death occurred in 1884. After that the Era Publishing and Trading Company was formed, and Charles A. Kirtland, who took up the editorship about 1886, presently became the controlling factor in it. About 1898 Ernest L. Prann became editor and proprietor of the "New Era," and has continued it ever since, publishing a paper which has a strong hold on the people of lower Middlesex county. From 1902 to 1903 the Era Company published the "Ivoryton Herald," of which S. F. Parmelee was editor.

Essex had three newspapers, both of them ceasing before the end of 1881. The "Saybrook Mirror" was started by O. G. Wilson about 1850, and lasted some six years. Charles L. Howard published the "Essex Gazette" in 1879 and 1880, and H. C. Newton published the "Middlesex Republican" for a time in 1881.

In East Hampton Francis H. Tiffany started the "News" in 1887, and discontinued it the following year.

The "Middlesex County Record" was the original newspaper publication of Edward F. Bigelow, who founded the "Middletown Tribune." It was a weekly published in Portland for seven years from 1889 to 1896.

The "Clinton Recorder" was founded by Charles H.

Scholey of the "Shore Line Sentinel," Guilford, in 1895, and has been successfully published for Clinton from the Guilford plant ever since. Allen W. Jones has been its editor almost from the beginning.

Tolland County

Rockville's earliest newspaper was the "Journal," published continuously as a weekly since 1866. Its publishers for several years previous to 1879 were J. N. Stickney & Company. Three years later the paper was in the hands of Thomas S. Pratt, one of the most vigorous publishers of the county, who continued the sole owner up to 1904. That year he admitted to partnership his son, Allen T. Pratt. Within two years, however, the Pratts had sold to the Journal Publishing Company, whose officers that year were F. A. Randall, C. S. Greer and R. S. Yeomans. Mr. Pratt's long career ended in 1908.

In 1907 the controlling, and subsequently the entire ownership of the "Journal" passed to David L. Hondlow, who still publishes the newspaper as a weekly.

The next newspaper for Rockville was the "Tolland County Gleaner," which A. W. Phillips began to issue from his brand new printing office in the fall of 1876. The founder and owner in the beginning, however, was B. Llewellyn Burr, destined to have a publishing career of over twenty years in the town. The "Gleaner" was soon sold to Mr. Phillips, who, being a printer rather than an editor and publisher, disposed of it as soon as might be to a Mr. Washburn of New York. The said Washburn, having other interests, and not finding the newspaper worth while to add to them, dropped the

"Gleaner" and went back to New York. Naturally it died without delay.

Burr (the Burr above mentioned) and Bryon started the "Tolland County Leader" in the spring of 1879, utilizing the material and machinery left idle by the departing "Gleaner." Mr. Bryon dropped out after two years, and B. L. Burr went on alone, building up and enlarging the paper, for nearly twenty years. In 1898 he sold the newspaper and its considerable printing plant to Thomas F. Rady, who had grown up in Rockville to be a practical printer, and William G. Brown. As Rady & Brown the business was conducted about two years, then the firm name became Rady & Company. Mr. Brown had gone into dry goods. Mr. Rady conducted the business end, and Harry C. Smith came to the paper as editor. Mr. Smith retired from the "Leader" in 1921, and afterward went into business for himself. The paper has been a semi-weekly practically since Mr. Rady's management began.

The Tolland county newspaper of earliest beginnings is the Stafford Springs Press. It was in 1858 that Fisk & Goff, proprietors of the "Journal" at Palmer, Mass., began the publication of an issue for Stafford Springs, which they called the "Stafford News Letter." James McLaughlin was at that time an apprentice in the office of the "Palmer Journal." Completing his apprenticeship, he in 1862 bought out Mr. Goff's interest in the Palmer establishment, and four years after that, he became the sole proprietor of the "News Letter," which he appropriately removed to the town after which it was named. Taking his brother, H. C. McLaughlin, into partnership, he fitted up a job and publication office at Stafford Springs, and

established the newspaper there as the "Tolland County Press," in 1876. In 1880, a briefer name seemed desirable, and it became simply "The Press," as it is today. It has been a weekly from the beginning, circulating through northern central Connecticut and running well into Massachusetts. For two years around 1888 Mr. McLaughlin published an edition for South Coventry, which he called the "Coventry Local Register."

From 1872 to 1885 James McLaughlin was the sole proprietor of the paper, but in the latter year he took his son, Lewis McLaughlin, into a partnership which lasted for ten years. Since his father's death in 1895, Lewis McLaughlin has carried on the business.

The stray newspapers in the county are few, the only one in the lists aside from the "Coventry Local Register" being the "Home Messenger" of Willington, which J. D. Taylor published in 1888, and which was of brief duration.

The journals of Connecticut Agricultural College at Storrs, though listed as college publications, belong properly to the press of Tolland county. There are three of them, the oldest the "Connecticut Campus." This started as the "Storrs Agricultural College Lookout," monthly, in May, 1896, and so continued to April, 1899. In May, 1899, it became the "Connecticut Agricultural College Lookout," still a monthly, and so remained until June, 1914. It became the "Connecticut Campus" with its next issue, October, 1914. Later it became a bi-weekly, and then a weekly in 1920. It so continues under the same name.

The "Connecticut Alumnus" started October, 1922,

and was the first alumni publication, as it has been the only continuous one.

The "Connecticut Agricultural College Review" was started in 1917 as the "Farm Bureau News," was changed in 1920 to the "Extension Service News" and in January, 1923, to the name it now bears. It is published largely under the auspices of the Extension Service, but the college and its Experiment Station contribute a small amount to its support and are represented by it. It is sent free to farmers, especially to organized cooperating groups such as the Farm Bureau members, and reinforces the program of carrying the college to the farmers as contemplated under the Smith-Lever act.

CONNECTICUT INSURANCE

By John M. Holcombe*

Born Hartford, Connecticut, June, 1848; son of James Huggins and Emily Merrill (Johnson) H.; A.B., Yale 1869, A.M. 1872 (honorable A.M. 1909); honorary degree LL.D. from Trinity College in 1921; married Emily Seymour Goodwin of Brooklyn, January 29th, 1871; actuary Connecticut Insurance Department, 1871–1874; since 1874 with Phoenix Mutual Life Insurance Company as assistant secretary; 1874–1875, secretary; 1875–1889, vice-president; 1889–1904, president; 1904–1924, chairman of the board of directors; also director Fidelity Trust Company (ex-president); National Surety Company of New York, Phoenix National Bank, Phoenix Fire Insurance Company; president Mechanics Savings Bank, Peck, Stow & Wilcox Company, Hartford. Has been president of the common council board, president of board of aldermen and health commissioner, member board finance and City Plan Commission of Hartford; lecturer in insurance course, Yale; Fellow Actuarial Society of America; member Yale Alumni Association (ex-president), Society of Colonial Wars, S. A. R. Society War 1912, Municipal Art Society (ex-president), Fine Arts Federation, Insurance Institute (ex-president), Congregationalist, Republican. Clubs; Hartford (Hartford), University (New York); home, 79 Spring Street; office, 79 Elm Street, Hartford, Connecticut.

* Mr. Holcombe expresses his appreciation to Col. Charles W. Burpee for his valuable services in the preparation of this article.

THE ultimate test of the value of human thought and effort is the service rendered to the greatest number. It is in this sense that insurance, in its various branches, is referred to as ranking next to religion. It follows that Connecticut's record gives the State a notable position in the world as a whole; for more insurance is carried in the United States than in all the other nations combined, and Connecticut has led the other states in devising forms of insurance to meet demands, while it has been excelled by but one in the volume of insurance written. In Hartford alone, on December 31, 1923, there were the home offices of thirty-one companies, with total assets of $1,084,057,-101, which have paid out since the first formal policy was written 113 years ago a total of $2,561,194,943.

Whereas early insurance was a venture, if not a gamble, today it is on a wonderfully accurate and scientific basis; and whereas the investment of premium accumulations was a matter chiefly of personal concern and hazard, today investment is such a tremendous exponent as to be guarded by exacting laws and governmental watchfulness, and the boon to commerce, banking, industry, agriculture, transportation and the government itself is beyond calculation. Alleviation of suffering through loss of property by any of the elements or the sinfulness of man, or through death itself, which was the original idea, has become a hardly greater consideration than the employment of the billions of income for the development of the country and the advancement of all enterprise which goes to promote civilization. The honest returns on generous investments have for their part gone to strengthen the purposes for which insurance was intended and like-

wise those purposes which have been evolved out of the fundamentals.

Burning means the utter annihilation of that much capital; insurance reduces the void to endurable proportions. Death brings not only mourning but loss of earning power still more harmful than loss of the product of man's toil, and insurance lessens the material shock for the bereaved and for the community. But these represent only the beginning of modern insurance, thanks in large measure to the study and resourcefulness of Connecticut men. Damage by storm to buildings or crops or enterprise of whatever character; harm by drought or flood; injury to live stock as well as to humans; burglaries, defalcations, honest men's errors, disease in any form, accidents on land or sea or in the air, explosions, earthquakes, bombardments, collisions, falls—in brief whatever goes to diminish not only the product of effort, material, or through the operations of nature, but whatever goes to reduce productive power, human or through the operations of nature, is covered.

Nor yet is the story told. Theoretically, to buy such coverage would be beyond the power of the mass of humanity, but with the aid of carefully devised system and co-operation as in America, and the prudent employment of each of the contributions however small itself, the individual cost is minimized. "Prudent employment" could not imply the forcing of these vast and daily increasing contributions upon an idle or reluctant world; demand for them there must be; what with man's constant energy and enterprise, demand there is, and that, too, of a character which warrants confidence. It is the demand of those who would develop our country along all the lines that have given the nation preëminence, the demand of those who

would push the plow to remotest points and follow it with steel rails and schools; the demand of the State for the support of its institutions, and of the separate communities for the necessities and improvements which cannot be paid for at the moment; the demand of commerce and of banks, and the demand of the Federal Government above all. The millions furnished the Government for the World War were all of a kind with the millions which had assured the farmers' victories in the West and South the previous seventy years.

It is only latterly that people have begun thus to analyze accepted facts, hence to appreciate, and thus to give credit to the genius and integrity of the Connecticut insurance men. It was genius and integrity alone which told, for there was no advantage of location, no advantage of harborage or water power or fertile fields. The same principles would have prevailed whatever the natural conditions. It depended upon the men, and, withal, upon their courage and persistency. Without this analysis and appreciation, their chronicle would be merely for the thrill of adventure or for the quest of the plodder.

And there is the touch of romance. On to and through the Revolution, the dwellers had been farmers or fishermen, scant of means, isolated, dreamy, but not visionary; stubborn for their rights, but content to meet each day's stern duty of armed defense or drudging husbandry. Gains and comforts of generations had been swept away by the war or crushed out by its taxes; barter resumed the placed of money currency. Then, as today, however, New England was blessed with choice of foreign ports for commerce; live stock and products of the soil, after being assembled at New Haven, New London and the river towns, passed overseas in ships that brought back highly

prized commodities from the West Indies. With the shaping of the Constitution and the Federal Government in 1789, there were added the ports along the coast; neighborliness developed, and over land as well as water tentative trade found its paths. It was fortunate that Connecticut more nearly than most of her sister colonies had paid her way year by year through all the wars.

Comprehensive history records that from the days of the ancients there had been crude forms of insurance, but it was only the original urge that these plain folk felt. There was a risk on the deeps—a risk that in some way must be shared lest individuals become discouraged and hope of progress die. In the ports at New Haven, Hartford and New London were found those who for a price —a gamble as it were—would assume the risk with a few written words signed in a faith that was unquestioned. There appeared then in 1792 banks, like the Hartford and the Union of New London, where such paper could assume stronger form.

In Hartford Colonel Jeremiah Wadsworth, a clergyman's son, whose record as commissary-general had endeared him to both Washington and Lafayette, whose judgment in finance had appealed to Robert Morris and Alexander Hamilton, who was a founder of the Bank of North America in Philadelphia, president of the Bank of New York, director in the first United States Bank, and promoter of the Hartford Bank, was one of a group of seers lending their names and influence to instill confidence into commerce. Major John Caldwell, first commander of the Governor's Foot Guard, and himself successfully bold in commercial undertakings; John Trumbull, whose personal turn was toward the muse of poetry; Elias Shipman, who was to continue his work in New

Haven; Peleg Sanford, secretary of Wadsworth; Daniel Wadsworth, the colonel's son; Ezekiel Williams, Jr., of distinguished family; John Morgan, John Chenevard and Michael and Thomas Bull—these were the names of some of those in Hartford who put their signatures, often as a group, to agreements to indemnify on marine hazards.

There was a slow feeling of the way to other insurance. If protection for vessels and merchandise were so much worth while, why not protection for dwellings? It is not to be said that these adventurers in the field had not heard of English customs, but it is to be said that these pioneers worked out their ideas from conditions as they presented themselves and not from precedents. Thus in 1794, when Merchant William Imlay of Hartford desired protection on his house for one year, Mr. Sanford and David Wadsworth as the firm of Sanford & Wadsworth issued insurance for £800 at one per cent rate, in a policy still extant and marked "No. 2." The firm wrote under their names "for the Hartford Fire Insurance Company," which probably included sundry of the other men here named but not incorporated.

Marine insurance was the more active. The field covered Middletown, Saybrook and New London, and rates ran from ten to above sixteen per cent, according to the nature of the risk, payment being by notes to be collected out of profits. The assurers put down their names for varying sums; they "chipped in" according to their judgment or circumstances. Mr. Williams carried the burden of the passing around of the papers and also of the collecting when losses were incurred. Sanford removing to New Haven and his firm being dissolved in 1798, the "Hartford and New Haven Insurance Company" (not incorporated) disappeared, to be followed in Hartford

five years later by the Hartford Insurance Company, chartered with a capital of $80,000. Its business was marine insurance, and in its earlier policies the word "marine" is inserted. The officers were Major Caldwell, president, and Normand Knox (cashier of the Hartford Bank), secretary.

Bank and insurance company stood side by side on the south side of Pearl Street near Main, where the handsome new building of the State Savings Bank now is and where the home office of the Phœnix Mutual Life Insurance Company was for many years till its removal across Bushnell Park in 1921, or in the center of what for nearly a century and a quarter was to be the chief insurance circle in America. Under the contracts no stockholder was liable beyond the extent of his holdings. Mr. Williams conducted an independent office until he succeeded Mr. Knox as secretary. Thomas Scott Williams, brother of Ezekiel, and later chief justice, followed his brother in that position.

It was not always smooth sailing, on the seas or in the office, but the interesting historic feature is that, while the example set by these pioneers was followed by many others around the State and along the seaboard, these men were among the few who continued successfully steadfast for the principles of insurance, and that they have been succeeded by men of like character and tenacity. This first marine company became the Protection Company in 1825, after wider scope for insurance on land had developed and the embargo followed by the War of 1812 had relegated shipping. Elias Shipman, dissociating himself from the Hartford group, was president of the New Haven Insurance Company which he established in New Haven in 1798, with Austin Denison as secretary, and

The home office of the Hartford Fire Insurance Company—the oldest insurance company in Hartford, Connecticut. This building was completed in 1921 and is one of the most beautiful structures in the city. It houses not only the Hartford Fire Insurance Company, but its allied organizations, the Hartford Accident and Indemnity Company and the Hartford Live Stock Insurance Company. These three companies have local representatives in all parts of the United States and Canada.

William Lyon, cashier of the New Haven Bank, as treasurer. Timothy Dwight, schooled as agent for the Hartford Fire Insurance Company of 1810, was made president of this company in 1833, but for purposes of winding up the business. Losses by French spoliations had proved heavy and the government was slow in securing the claims. On similar rocks youthful companies in Norwich, Middletown and New London and the Ocean in New Haven were wrecked.

Lessons of experience have made insurance so methodical and (humanly) accurate that the expert of today, unfamiliar with the story of development, is astounded when told how they did business at the beginning. He might comprehend the pure gamble of the Greeks four centuries before Christ who, according to Demosthenes, advanced money on cargoes with prospect of heavy reimbursement if the voyage were a success or nothing if it were a failure; he might be merely amused at the methods of the Belgians who in 1300 were the first to put marine insurance on some sort of a basis, or at the action of the English Parliament in 1600 when it appointed a commission to settle controversies over claims resulting from contracts made with individuals using Lloyd's Coffee House as headquarters. English haste in creating companies while the ashes of burned London in 1666 were still warm might be excuse for crudities then, as also the undertaking of the city government to do a "cut-rate" business till the court stopped it.

But to say, by the book, that the early Americans relied on guesswork and had no reserves, to say that they put in only a few dollars and took care of the rest by notes, which bits of paper were left to be wiped out by the dividends, puts a strain upon the imagination of the

modern man of affairs. There is implied both a faith in human nature and a confidence in bold venture no longer fully comprehensible after years of law-compelled safeguards, and, it should be added, after a period of rascally profiting by victims' gullibility. But the record stands that those Connecticut pioneers met exigency by integrity, and that integrity strengthened with exigency. Those who perhaps were predestined to furnish the worst lessons of experience paid to their last farthing.

The so-called Contributionship, established in Philadelphia as far back as 1752, had been based on the principle of pooling to ease the burden of loss, but it was without allurement, was as old as the methods of the guilds and as undependable as the church contribution box. All marked the groping after the real panacea, and the great institutions today are the monuments to those who were endowed with brains, patience and perseverance along with courage and integrity.

The group represented by Sanford & Wadsworth were of that kind. Sanford and Wadsworth primarily were the proprietors of the foremost "general store"—not to say "department store"—in Hartford. They experimented in every way. This Imlay fire insurance policy of February, 1794, was for most part a printed form—No. 2 of its series—and a month later they were advertising in the "Courant" that they were now open for that sort of business. If they had printed many forms it is doubtful whether they exhausted their supply, for the 2200-years-old Greek idea could not find permanent lodgement in the minds of Wadsworths, Caldwells and Morgans. Colonel Wadsworth may have heard something about the founding of the Insurance Company of North America in Philadelphia, chartered in 1794 and flourishing today.

Nor did the succeeding voluntary co-partnership of the Hartford pioneers satisfy, nor yet the unchartered company, nor yet again the chartered company with no financial foundation. What they did not learn from Neptune's rudeness they learned from a government spite which palsied shipping with an embargo. They were men the most prominent in public life, in civic affairs, and in commerce. Coincidentally they had studied out the problems of banking, and it was thus and thereby that they were led into the right channel.

In 1810 they procured a perpetual charter for the Hartford Fire Insurance Company, unabashed by the unhappy but wholly honorable fate of its namesake—a title to continue, as an agent later expressed, "till the great conflagration, when, it is said, 'the heavens shall be rolled together as a scroll, and the elements melt with fervid heat.' Then and not until then, with her policies all cancelled, may she 'climb the golden stairs' and open the first office in the New Jerusalem." They chose the stalwart Nathaniel Terry, bank president, mayor, congressman—ancestor of General Alfred H. Terry of the Civil War and the Indian campaigns—to be president, and Walter Mitchell—uncle of New Haven's Donald G. Mitchell of literary fame—to be secretary, Mitchell to be paid $300 a year and $30 for office rent, and Terry nothing. The capital was $150,000, ten per cent paid in, the balance in well-secured notes, automatically retirable through dividends. That dangerous shoal was yet to be charted, but they experienced no trouble from it. Their most distinctive act was to vote to have an invested reserve, and the bank offered the first safe opportunity for such essential course. They bought fourteen shares, which amount, it may be said, has been increased to 1027 shares in 1924

with a value of over $400,000. Their next step was to publish full-page advertisements in the four page "Courant" periodically through the year.

The peril due to lack of classification amounting to a science today was mitigated by the absence of today's *bête noir,* the "moral hazard." They rated up soap boilers, carpenters, boat builders, rope makers, tavern keepers, printers, and all factories that used "fire heat," and they knew their patrons. Men of the standing of Anson G. Phelps in New York and Timothy Dwight in New Haven, son of President Timothy Dwight (the first) of Yale, were the agents, after 1820. The commission was 5 per cent. "Overhead" expense was kept down. The bill for the table and bookcase for the office, which was under the very eaves of the State House, was $21.83, of which the $300 secretary disallowed 58 cents, the charge for setting up the bookcase.

Primitive items bring a smile but give picture of the times. The first year, according to the company's published history at its centennial celebration, 526 policies were printed (at a cost of $7.89), and in 1815, 227 (at a cost of $3.40). Premium income and interest combined the first year equalled $3,500; in 1820 they had a little more than doubled. A revised claim, paid in full, reads as follows:

32	Square glass broke paid for setting and mending frames	$ 4.50
1	Bed stead sides and end pieces gone and rope	2.00
1	Silk umbrella (new) lost	5.00
1	Sett castors cost 12 dollars damage, say	4.00
1	Salt cellar broke $1.50, 2 or 3 tumblers broke	2.00
	Damage done paint on house, barn, etc	18.00
		$35.50

Deduct umbrella	5.00
	$30.50
Clock key lost	.50
	$31.00

Another was for a fire in a local storehouse:

1,000	President's Tour at $1.25	$1,250.00
500	Memoirs of Jackson	625.00
800	Labowine's Campaigns at $2.25	1,800.00
5	Setts Scott's Bible	160.00
500	Uncle Sam in search after His Lost Honour at 50c	250.00

Early imbued with the importance of fire prevention, the company contributed generously toward maintaining town watchmen and for means to fight fire, for which there was no local tax till 1822. The apparatus consisted of hand engines fed by bucket brigades. Every able-bodied citizen was to attend all fires, under penalty of a fine of $2. "Fire sacks" were provided for salvage work. An item in paying for repairs on buildings damaged by fire was that for rum for the workmen. It cost $1 for a horse and driver to bring a shaft twenty miles to an Enfield mill, $35 for 19 days' labor of men in fitting the shaft, and $1 for the "brandy drank by the hands." In another instance the cost of repairing a residence was $152 plus $3.50 for rum for the workmen.

The names of several of the founders of the company are perpetuated in Hartford by institutions like the Wadsworth Atheneum, the Watkinson Reference Library, and Watkinson Farm School, and in the archives of the Hartford Hospital; some of the original stock is still held in the families of the subscribers, and relatives of the founders are actively concerned in the affairs of the company today. President Richard M. Bissell himself is a grand-

nephew of Ward Woodbridge, one of the first directors.

In New Haven Elias Shipman's New Haven Insurance Company, which, as previously said, was chartered in 1798, declared a dividend of 30 per cent the first year and of 50 per cent the second year, on the money invested. The capital was $50,000, one-fifth in cash. There was close affiliation with the New Haven Bank. Mr. Shipman continued as president till 1824, when he was succeeded by Gilbert Totten, and he in turn by Timothy Dwight.

The New Haven Fire Insurance Company, with nominal capital of $100,000, was incorporated in 1813 with Isaac Tomlinson as president. Again it was the foremost citizens who were interested. John H. Lynde was the first secretary. Charles Denison succeeded to the presidency in 1818 and was followed in 1820 by Simeon Baldwin, with Roger S. Skinner as secretary. Mr. Skinner was also agent of the Hartford Fire. In 1822 it was decided to merge with the Hartford, and the latter's first of a long series of reinsurances was arranged. The Hartford gave a bond for the full amount of its own capital ($150,000), and as there was no appreciable increase in receipts, it is to be presumed that this represented the full amount at risk. Soon thereafter, in 1825, the Hartford wrote the first insurance on Yale College buildings, covering the "Old Brick Row" for a total of $20,000, through the agency of Timothy Dwight.

The Hartford's dividends, which had been good from the beginning, began to reflect the adverse conditions, and from 1829 to 1841 there were none. What insurance in Connecticut was weathering the storms, and why, can be learned only by taking the history of the successful companies together and noting their inter-relationship, both direct and thorough banking affiliations where calm-

ness and staunchness prevailed, largely because of community of wisdom, as well as community of banking and insurance interests.

The lusty Aetna Insurance Company was incorporated in May, 1819. At the start of the company's history is a touch of that romance which gives special interest to all Connecticut enterprises, whether in nutmegs, shoe-pegs, tinware, sewing-machines, clocks, fire-arms or finance. Tradition has it that the great Aetna of today owes its inception to the inaccessibility and independence of the $300 lawyer-secretary, Walter Mitchell, of the Hartford, in whose law office the company's business centered. Mr. Mitchell's home was in Wethersfield. People are represented as being so eager for insurance protection that they would plod to Wethersfield after him, when they found his office closed, and as the road was usually deep in either mud or dust they complained to those who concluded it was time for another company. It little matters that Mr. Mitchell's habits and devotion, as described by his uncle, "Ik Marvel," were quite in contrast with such description, or that men like Samuel Tudor, Jr., Griffin Stedman, Joseph Morgan and James M. Goodwin—to name a few of them—hardly could be influenced by such presentation.

The charter granted called for a capital of $150,000 with right to increase to $500,000, ten per cent in cash and the balance in notes, as usual. Thomas K. Brace was made president in June and Isaac Perkins secretary, Mr. Brace soon to be succeeded by Henry Leavitt Ellsworth, son of Chief Justice Oliver Ellsworth. The first year's expenses, including the secretary's salary of $225, were $451.83, and the income $3,646.42, with no losses. Mr. Brace returned to the presidency the next year and was

to continue till 1857, when he retired at the age of 78. He was a Yale graduate and the head of a large wholesale grocery house. In August of the first year, the Middletown Fire Insurance Company, with risks of $200,000 was taken over. The company departed from custom by going far beyond its environs for its business, which, together with the custom of dividing profits somewhat liberally, was to have to do with troubles of the next twenty years.

In 1819 dependable currency was still scarce, but the Second Bank of the United States had been established (in 1816) with branches throughout the land which discouraged speculation. At the very time the Aetna was being launched at Ransom's Inn, the no less staunch and enduring Society for Savings (a mutual savings bank) was being launched at Morgan's Exchange Coffee House, conducted by Joseph Morgan, ancestor of those who have made the name a synonym of financial enterprise, a name commemorated in Hartford by the Morgan Art Memorial. The directors of the Aetna were also the first directors of the savings bank. Ward Woodbridge, David Wadsworth and others of the Hartford Fire, were among the petitioners for the charter; Wadsworth was the first president and Woodbridge and others of the two insurance companies were vice presidents. Likewise men prominent in the affairs of the Hartford Bank and the Phoenix Bank (established in 1813) joined hands and wisdom in this institution. And as years went by, officials of other banks and insurance companies, both life and fire, were to meet in the directorates or in the executive offices themselves of this and other banks, say nothing of commercial organizations.

The point in Connecticut's success emphasized by this

THE HOME OFFICE OF THE AETNA FIRE INSURANCE COMPANY

This Company was chartered in 1819 and has always occupied a dominant position in the fire insurance business. Since its organization this Company has paid to its policyholders more than $250,000,000 in losses.

Its affiliated company, The World Fire & Marine Insurance Company, is domiciled in the same building.

analysis is the characteristic of standing shoulder to shoulder, each man pledging his integrity for the good of all, a characteristic to be forcibly illustrated in the time of catastrophe which were to mark the history of fire insurance.

From the blow dealt at shipping by the embargo and the War of 1812, the Norwich Company revived in 1818 by changing to fire, and the Hartford Insurance Company of 1803, somnolent while the Hartford Fire was being established, took a new lease on life when in 1825 the stockholders incorporated with $150,000 capital. William W. Ellsworth, formerly secretary, accepted the presidency and continued prominent in insurance though resigning this presidency in three years and from 1838 serving four terms as Governor and later as judge of the Supreme Court. Thomas C. Perkins, like Ellsworth, a prominent Yale graduate, was secretary, destined to become one of the most distinguished members of the bar. The new company was to set the pace in the matter of agency system, through the perspicacity of Ephraim Robins, a Hartford man who in 1825 lost all his property by cyclone in the West whither he had removed. Impressed with the value of insurance he asked for and obtained the privilege of conducting an office in Cincinnati which became a rendezvous for such men as William H. Harrison, Bellamy Storer, Alphonso Taft and Nicholas Longworth—indeed, a sort of club room. Here also Robins first put into force the principle of training agents. His death in 1846 marked the close of a remarkable career. He was succeeded as a "special agent" by Mark Howard who was to gain fame by his ability to travel wide territory.

Mutuals

In the period at about the end of the first quarter-century of Connecticut's insurance history, mutual fire insurance began to assert itself. The method of clubbing together economically and sharing profits and losses was as old as the era of civilization; the inherent difficulty with it developed from the aversion of a considerable portion of participants to sharing the losses when the time came, and also to paying overhead expenses not wholly understandable by hard workers to whom an office seemed a place to loaf in. But before the days of intercommunication there had developed in America a cohesion of small community, an intensified neighborliness, which, in truth, broadening from town to county and then to state, was to prove a conspicuous thread in the weaving of national history. It was with appreciation of this neighborliness that mutual fire insurance got its hold, and companies that went on to success were to solve problems in a way to contribute largely to the development of the science of economics.

The Mutual Assurance Company of Norwich was established in 1795, on the basis of the "deed of settlement," and flourishes today, with net premiums of a few hundred dollars and net losses almost negligible, on a method still more circumscribed that at the outset. Its original guaranty capital was £2,000 and its meetings after the fashion of town meetings. Its experience, at times most annoying, caused it to adhere more and more closely to discrimination and to limitation to well attested applicants close at home. Since 1838 it has excluded everything except dwellings and has held each risk down to $1,000. The secretary is the executive, and an honorable position to

hold it always has been since the days of Zachariah Huntington and Thomas Tracy.

In the years 1820 to 1840, neighborliness by counties was emphasized. Windham, Tolland, Hartford, Litchfield, Middlesex and New London came in that order, the years being, respectively, 1826, 1828, 1831, 1833, 1836 and 1840. Of these the Hartford, Litchfield, Middlesex and New London are flourishing today. Variation in idea of scope was worked in, as seen by the rest of the list; Danbury Mutual (1850), Farmers (1883), Farmington Valley (1854), Madison (1855), Greenwich (1855), Harwinton (1856), Washington (1862), State (1867), Rockville (1868), Patrons (1888), Guilford (1903). All of these except the Greenwich and the State continue to report annually to the state commissioner, which is the more remarkable when it is noted that the percentage of failures of mutual fire insurance companies throughout the country has been large, the unsuccessful not adhering to the principles prevailing in Connecticut. The mutuals of Connecticut excelled these of all other states.

President William A. Erving of the Hartford, one of the foremost companies, brings out the principles clearly. First, though county limit was removed, state limit was strictly observed. The secretary was given a small fee for writing the policy, and a very meagre sum was paid in, the insured obligating himself by note to pay assessment up to a certain per cent of his insurance should occasion demand. For this was substituted a plan by which the company could make a "premium charge" on its record of the policy, having all the binding effect of a note for purposes of assessment. But there never was an assessment. It was in the days of reliance upon "good luck." Supervision, reserves, technical solvency were awaiting

the day of some great fire before they should be called into existence; and the customs of the people were preparing the fire without the least heed on the part of assurers that they were so doing.

Aside from the initiatory charge, members received their policies yearly merely by paying 25 cents. By 1842 new members were not realizing the assessment obligation. When the books showed an abnormal loss of $3,200, they also revealed a deficit of $360. There was but one thing for it if business was to be perpetuated, and Secretary Charles Shepard pointed it out: they must borrow now and at once advance rates, not only to pay off the loan but to put the company on a cash basis, letting the initiatory charge be sufficient to cover probable cost. The calculation of what that charge should be was simplified by the fact that risks were greatly limited in character; and that was progress enough for a mutual till succeeding generations should work out the classifications and corresponding rates to suit or be adaptable for all conditions. It remains that a fundamental principle of mutual fire insurance, namely, that members can be assessed (the hat be passed around), was repudiated by these wise men the moment the apparent need for it appeared. At once there was shift to the ground that, with neighborliness, discrimination and consequent economic administration, the obligation of each should be anticipated and fixed. Lack of just that discernment and courage brought disaster for many mutuals throughout the country and enactment of stern legislation in some states. The circumscription of risks along with the circumspection gave the Connecticut mutuals a preference in the days following the Chicago fire of 1871, and much of the business then written remains on the books.

Working away from the original conception of the contribution box, mutual fire insurance has thus established a place for itself in the world of finance. An idea of their field is formed from their reports of business in 1923, as illustrated by the larger ones and also by the smallest, that of Harwinton exemplifying most markedly the "neighborliness" in its strictest sense:

	Net Premiums Paid	*Net Losses Paid*	*Surplus*
Farmington	$ 182	$ 0	$ 15,000
Hartford County	132,212	68,130	1,788,000
Harwinton	50	0	55
Middlesex	235,291	130,906	1,326,624
Mutual of Norwich	312	15	18,631
New London County	3,387	2,173	323,000
Rockville	1,594	2,170	45,000

Adjusting to Requirements

The stock companies started business on the basis of writing only for those who applied at the office. In that the "mutual" theory was manifest. They were the first, naturally,—with territory not limited—to feel the urge for expansion and hence for representatives. There was the sequence indicated in that sentence. The pioneer company having been persuaded to "write a risk" in another state, on representations of an aquaintance, and having experienced a considerable loss, forthwith applied its knowledge thus gained and the directors voted that where risks were remote someone associated with the company should be looked to for a report upon it. Though not contemplated by the directors, the quick sequence was that the agent found more risks in his community—for a consideration,—and the business soon began to go whereever energetic men took it up. In retrospect it is

easy to discern that the concomitant should be abundance of reserve and classification and inspection—Sanborn maps, daily reports and all the other safeguards to come in time. But in the period of the 1830's, they were not so far away from the hand-to-mouth experience as to realize possibilities; if people were careful about fires in Connecticut, it was not to be taken for granted that they would be in Georgia or Missouri; dividends must come to mean more than cash for distribution among those assuming the risks; in this insurance, for which the demand was increasing, there must be the identical prudence which characterized these New Englanders in their households and private enterprises. This lesson was slow in the learning. The banks helped.

In 1829, the capital of the Hartford showed an impairment $43,000. During the twenty years of existence, losses had amounted to $175,926 and premiums had run up to $219,694, to which was added $21,656 interest.

That was satisfactory, according to theory. But disbursements had included $30,000 for expense (very little in the office), and $122,100 for dividends, making the total with the losses, $328,000, roughly. This indicated shoals. It is worth citing because, sooner or later, in the career of most companies, it was the same—in many fatally worse. The Hartford men, the asset of good will established, saw the alternative of restricted territory and risks with increase in rates, or the pledging of their fortunes; the former, with business inviting and competition challenging, was unthinkable to the majority; with that courage which was to be retested in future years when those around the country were to lose their grip, they chose the pledging, and there was their solid bank to

help them. They borrowed, and gave their stock and stock notes as security.

The Aetna faced similar trouble, aggravated by heavy losses at remote places, in an equally firm manner, and despite the financial unstability of the period. On its suggestion a conference of companies was held at which it was determined that a basis of better rates was reasonable and desirable.

In a short time dividends were again voted. Conscience, courage and return of prosperity worked together to minimize the relative effect of dividing profits as they came in. "Surplus" was still a word and not a factor. Lessons were yet to be learned, and the wise critics of today must keep in mind that these pioneers were having to hammer out their economics as they went along. The companies' funds already were aiding near-by enterprise, foretokening their wholly undreamed-of-power and value in the country's development. The Aetna in 1835 subscribed for 300 shares of the Hartford & New Haven railroad. And that company was building up its "foreign agencies," as everything outside of New England could be called. It placed the first policy ever placed in the small town of Chicago in 1834; President Brace took a whole summer to go over territory now covered in a few days; a director was appointed to give most of his time for this slow travelling—all as preliminary to the really historic journeys of Joseph Morgan in 1842, most interestingly recounted in his carefully preserved diary. Average daily expense was under $4.00.

The New York fire in December 1835 wrote large on the wall the lesson of surplus. Of the two Hartford companies only the Hartford was a sufferer, and that to an extent of $65,000. The fire came the very night the di-

rectors were dining together in celebration of immediate prospect of dividend resumption. Wholly undismayed, President Terry pledged his private property at the bank and with Secretary Bolles drove to New York in a sleigh on a zero morning. Over the smoldering ruins, companies were confessing bankruptcy, the city was in a panic. President Terry, from the street corner, announced that the Hartford would meet every claim in full and added the reassuring information for the distressed merchants outside the burned area that it would take new insurance. It thus developed that the strength of the "surplus" lesson was weakened somewhat through the avidity of the people who rushed to pay premiums to a company demonstrating so conspicuously that its insurance insured. In six months premiums went from $19,000 to $98,000. And that the "surplus" lesson was really in the learning and in the learning only is manifest from the records which show that resumption of dividends was postponed till November 1841; and one more unforeseeable (or leastwise unforeseen) series of experiences, including New York, St. John's, N. F., Nantucket, Albany and St. Louis, was to repeat the lesson with resultant suspension of dividends from 1846 to 1853. Such fires would be insignificant on the records of this century, but in their day and time they brought a comparable alarm and anxiety.

The fire in New York which opened this series in 1845, took $6,000,000 in property out of the heart of the city. The Aetna was now a sharer in the disaster—to the extent of $115,000. When the glum directors assembled in special meeting, a prolonged silence was broken by the query from one of them: "Mr. President, what are we to do?" "Do?" exclaimed President Brace, looking at the bundle of securities just brought from the strong box. "Pay im-

mediately, if it takes the last cent of my own property in addition to what we have here." He was voicing the sentiment of the whole board. The reward of valor was increasing business and dividends. All the stock notes were wiped out by the 20 per cent dividend of 1849, and coincidentally there was second increase of the capital by $50,000; its assets were $457,000, despite the St. Louis loss of $125,000, and its liability for losses $140,000. In 1854, when the Protection yielded to pressure of losses, the Aetna succeeded to much of its inland marine writing and also acquired some of its strong men for duty in the West, and by enterprise in every direction pushed on to new success. In 1853 its general agent in Cincinnati prepared the first blank proof of loss, which holds today, in general form. It was the company to introduce outline charts in 1857, and all along the years it was educating its men, its book of instructions in 1819 being the first of its kind ever published.

The Hartford likewise was finding it necessary to increase its capital, making it $500,000 in 1857 out of profits in the treasury, and a million seven years later. Also it was furnishing strong men for officers of other companies.

The Security of New Haven came into the tempting field in 1841 as the Mutual Security, combining the stock and mutual plans but confining itself to stock business after two years. For several years it made much of marine insurance till 1872 when it devoted its attention to fire risks with steadily increasing returns. Its first president was Joseph H. Clark.

The City Fire, Hartford, was another company that assumed that mutual insurance would be acceptable to city business men, soon to be disillusioned, and in 1851,

four years after being chartered, it resorted to stock-company insurance but delayed organization another two years. Ralph Gillett was president and good men were associated with him. The City Insurance Company of New Haven began auspiciously under the leadership of Wells Southworth in 1850, and after a cessation for ten years, again in 1874 with James M. Mason guiding, but only to retire honorably two years thereafter. The Bridgeport Fire and Marine, incorporated in 1850, was the only Connecticut company that got into serious financial difficulties, by reason of the force of the New York general law of 1849. It lived but eighteen years. The state fire of New Haven, 1855, was a short-lived swindle with several prominent New Haven men among the victims—the only really black spot on the State's record.

The enactment of the New York law in 1849, while intended to give better control, appeared to encourage development of new companies. In sixteen years those doing business in New York increased from 24 to 109 with capital of from $150,000 to $300,000 each. The consequent scramble for premiums was demoralizing and the effect was to be felt, nationwide, till the formation of the National Board of Fire Underwriters in 1867, and even after. But there were still three more companies of the genuine Hartford stamp to come into existence and face down the evils and the perils of the day.

The Connecticut Fire Insurance Company began somewhat tentatively in 1850 with a mostly stock-note capital but with backers of standing and experience, like Joseph B. Hosmer, David F. Robinson, who formerly was president of the Protection, Julius Catlin, James Dixon, Tertius Wadsworth and Edson Fessenden. Benjamin

W. Greene was president, to be succeeded by John B. Eldredge, the first secretary. The principle was to exercise greater care in selection of risks, subordinating volume of business to quality.

In 1853 another strong group of men, including Nathan M. Waterman, William Faxon, Elisha T. Smith, James Walkely, Nathaniel H. Morgan and Ralph Cheney, was aroused by a life insurance man to enter the fire lists as the Phoenix. The life insurance man was Henry Kellogg, of the local force of a Hartford company, spurred in his ambition by a snub he believed he had received. The company started with a capital of $200,000 in 1854 and first with Mr. Morgan and then Simeon L. Loomis as president and Mr. Kellogg as secretary and mainspring. Pushing to the westernmost territory and the first to reach the Pacific Slope, the company was a success from the start. The elimination of stock notes was expedited by legislation in certain of the states which had begun to analyze wreckage of companies. On the wave of prosperity in 1863, Mr. Kellogg was made president and William B. Clark began his long career as an insurance official when chosen secretary in place of the redoubtable Kellogg. When in 1867 Mr. Clark went to the Aetna he was succeeded by another man of marked qualifications, D. W. C. Skilton.

The spirit of the times was well illustrated in 1857 when the chartered Merchants opened its books for stock subscriptions in Hartford and the supply of $500,000 worth of shares was exceeded immediately by nearly $52,000 —with the old 90 per cent in notes. Mark Howard, the progressive spirit of the Protection, was chosen president, and associated in the directorate were Samuel Woodruff, James Bolter, Guy R. Phelps, W. H. D. Cal-

lender, Charles T. Hillyer, Richard D. Hubbard and others of like calibre in business and professional circles. The stock-note system did not appeal to them; they early secured cash in place of paper. And with conservatism, all went well.

The Charter Oak and Marine appeared confidently in Hartford in 1856 with Ralph Gillett, late of the City Fire, as chief executive. Impaired capital in war times and a feeble surplus in the 1871 test in Chicago broke it down. The Home of New Haven, 1859, had not had sufficient start to get the profit obtained by the older companies in the war period, and resort to reckless methods ended in a crash in 1870.

Meanwhile the North American had attempted the now generally discarded stock-note method, barring it from many states. But it had what many new companies lacked, and that was men of experience, with James G. Bolles its first and third president, formerly secretary of the Hartford. It ran well till the Chicago test.

The New England Fire and Marine, at Hartford, was born in 1858 for a brief life of eight years. The Norwalk Marine and Fire of 1858 (beginning business in 1860) progressed in a small way till the London and Lancashire of Liverpool acquired it to utilize in its fast increasing American business in the early '90's. The Thames Fire of Norwich, lasted from 1859 to 1866. In the Union Fire of Hartford, Ralph Gillett appeared again as a president but the company's existence was only through the early days of the war. The Putnam Fire was started by those who counted much on the ability of Hartford men, whether they were versed in insurance or not, and when, not long after organization, Samuel Woodruff of a prominent manufacturing concern was called to the presidency,

leaving the original secretary to administer affairs, one error followed another till in 1868 S. G. Parsons was put in to save what he could, and he was followed by two others who likewise had found the task too difficult when the Chicago disaster snuffed out the company. The Quinnipiac in New Haven retired harmlessly in 1871, paying all it owed, after two years of effort. The Meriden, beginning in 1872, promised well but the Boston fire stunted its growth and in 1892 it was squeezed out by the larger concerns. The Atlas succeeded the Charter Oak in Hartford in 1872-3 but could get nowhere.

The Chicago Fire Period

For vigorous history, then, we have the line-up of the Hartford, Aetna, Security, Connecticut, Phoenix, Merchants' and the Orient to observe when the Chicago fire came on October 8 and 9, 1871, like a bolt from the blue. The period of the Civil War which had been successful for staunch companies, had been succeeded by a period of uncertainties in the period of inflation and of questionable methods of getting rich in a country that had proved itself a giant.

The Hartford's president was George L. Chase, a Massachusetts man who had done railroad as well as insurance business in the fast-striding West. From that day in 1867 and with George F. Bissell, of Manchester antecedents, at Chicago directing the tremendous western development (which had given protection to the Illinois home of Abraham Lincoln as the southern development had given it to the home of Robert E. Lee), there was an era of expansion and of bold determination to continue throughout the forty-one years of Mr. Chase's incumbency. The $150,000,000 fire in the nerve center of all

the West, in October, 1871, caused company after company to totter and then to fall. The Hartford sent its agents printed notices as fast as expresses could carry them that it would meet every demand, and it did not flinch when that demand ran up to nearly two million dollars. Every claim was paid, with the aid of the Hartford Bank and the Connecticut Mutual Life Insurance Company, though only a million, or less than was demanded for the reinsurance fund, was kept in the treasury. When capital was cut in two and immediately rebuilt to $1,000,000, rights of stockholders to subscribe at par commanded $85 a share in the market. General Agent Bissell was the first to open an office in Chicago after that fire.

Following quickly—as insurance time goes—the Boston $80,000,000 fire of November 9, 1872, even as the Baltimore fire of 1904 and the San Francisco horror of April, 1906, claimed more insurance victims, but the Hartford took them as an incentive to so much more work, so much more demonstration of what real insurance exists for. The San Francisco toll from the loss was $2,891,287. The loss to all the companies of America was equivalent to every cent of profit from underwriting for forty-seven years, or since 1860, plus $80,000,000. The minutes of the directors' meeting May 1, reads: "Officers are authorized to borrow $2,000,000 to settle claims and to sell such securities as may be necessary." The reserve was a tower of strength.

The Chicago fire wiped out the carefully acquired assets of the Connecticut. John B. Eldredge was then president and Martin Bennett, Jr., secretary, with name already widely known. To such men the word "surrender" was impossible. Mr. Bennett conferred with a committee of claimants, eager and critical when other companies

were going to the wall, offered 35 per cent and the peril was past. When San Francisco called upon the whole world for aid, John D. Browne was president, a man of the type of all Connecticut insurance stalwarts from the beginning, energetic to the last degree but wholly imperturbable. If he had anxiety, neither feature nor manner revealed it. It is illustrative of the contrast between this and fifty years previous that from his maps and records he could say to his directors soon after the cataclysm: "We shall need about $2,400,000." After several months the exact figures proved to be $2,370,740. This was nearly two and one-half times the capital. Forthwith the capital was reduced one-half and immediately raised to $1,000,000 at $200 for $100 shares.

The Phoenix had $600,000 capital, $1,900,000 in assets and only $14,000 cash on hand when the Chicago news terrified the insurance world. The work to which President Kellogg had given his life seemed to be destroyed. But there was no yielding of prestige. Former Governor and Director Marshall Jewell hastened to the stricken city from Detroit, where he chanced to be, and with General Agent E. J. Bassett of the Aetna viewed the ruins. Together they agreed that Connecticut should be first to stay the panic impending. Without hesitation this man of commanding presence mounted a box in the agitated throng and, gaining attention, announced that the Phoenix would pay its losses in full, following which he gave a check for $10,000 for policy No. 10,752 held by Isaac C. Day. This the "Chicago Tribune" announced in a huge bulletin which was greeted with cheers and hysterical laughter by the homeless, despairing mob. Meantime, standing on a barrel not far away, Bassett was making a similar announcement and was signing a check for $7,350

on policy No. 34,382 in the Aetna, carried by John B. Drake. Only those who lived through those agonizing days can realize what it meant for the whole country to have Connecticut prove her staunchness, through all her great companies, at that hour. The capital of the Phoenix was promptly cut in two and then restored by new subscriptions in a ready market. At San Francisco the company's loss was $1,771,103, paid as promptly as the general upset would allow.

It is obvious that the attitude and spirit of all the Connecticut companies were alike. There must be achievement; if for any reason there were obstacles not to be overcome, another path to the main objective must be found. The comparatively youthful, yet firmly supported Merchants gave a brilliant example of this latter, and seeming defeat was turned into victory which was to yield a harvest for all. It was the company Mark Howard had sought to make ideal, and associated with him executively in 1871 was a man whose qualities had made him a model judge of Probate in the Hartford district before he was brought into the great insurance circle—James Nichols, at this time secretary and for years to be president. The unprecedented Chicago "thrust" against humanity would have left the Merchants among the fallen had it not been for the buoyancy and quick-wittedness of its men. The loss of $1,076,000 was half a million more than the assets and five times the amount of the capital, and withal many mortgages on Chicago property were rendered worthless. It was deemed at the moment unfortunate that absolute unanimity of creditors could not be obtained for an eminently fair plan of settlement. Without hesitation, the directors proceeded to convert everything into cash, including office furniture.

Then an unutilized charter of 1869 for the National Insurance Company was brought from the vaults. General William B. Franklin, James G. Batterson of the Travelers, former Governor Richard D. Hubbard and others put their names to the books opened for $200,000 for the new company, and in a short time the amount was oversubscribed. The amount was increased to $500,000 and the directorate of the Merchants was enlarged by the election of leading, conservative men, President Mark Howard and Secretary Nichols to guide. Boston's demands did not daunt them; they followed the method of reducing and then increasing capital; and when the whole world trembled under the San Francisco debacle, the National paid its losses of $2,570,000 and went on.

Reference has been made to the manner in which local banks stood by the insurance companies in their heroic battles, and much might be said of the aid from life insurance companies and from other financial institutions, but any thoughtful reader will realize that underlying all was the support of stockholders, old and new, who subscribed so liberally and promptly. The sections of this history devoted to finance and to the general life of the people in Colonial times and since confirm the world-wide reputation of New England citizens for prudence and thrift. Therefore, that they so forcibly emphasized their confidence in the men who established and through succeeding generations maintained the companies says all that need be said about the character and ability of those men. And the financial reward for this confidence is strikingly in evidence.

In the rush of new business, following the Chicago proof of the necessity for insurance, in November, 1871, the Orient Insurance Company came into existence in

Hartford. The sponsors included men who had been active in the successor to the Connecticut Mutual Fire (1847), the City Fire whose resources had proved insufficient in 1871. Charles T. Webster had been secretary of it and Sheldon C. Preston vice president. Mr. Webster was made president and Mr. Preston vice president of the new corporation, whose capital was $500,000. The names of Leverett Brainard, William H. Bulkeley, Frederick R. Foster, George M. Bartholomew, James G. Batterson, Joseph S. Woodruff and Knight D. Cheney also appear on the list. The grit with which the yearling withstood the Boston drain in 1872, reducing its capital and then putting it back again and pushing on to $1,000,000, attracted other than Connecticut attention. The London and Lancashire of Liverpool, England, through its American manager, Archibald G. McIlwaine, Jr., valued it highly enough to secure it in 1900, whereupon Mr. McIlwaine was made president. Among other companies soon to be taken over was the State Mutual established in 1867.

The Later Days

Since the Chicago-San Francisco period it has been what the casual reader considers the "same old story"—year after year of heavy losses but year after year new triumphs in management, expansion and widening of scope till today it is possible to cover need of protection in practically all walks and phases of human existence and endeavor. But one new company has been added to the list of native stalwarts, namely the Standard which was organized December 31, 1909, with capital of $500,000 and paid-in surplus of $500,000—rather in contrast with the early half of the preceding century. M. L. Hewes, whose grandfather John Hewes originated the

Firemen's of Baltimore in 1820 and was its president till his death, and who himself had been in insurance since the age of 16, was the prime mover and president, and the financing was by a list of men including President Charles E. Chase of the Hartford, President Morgan G. Bulkeley of the Aetna Life, President Sylvester C. Dunham of the Travelers, President Atwood Collins of the Security Trust Company, President John R. Hegeman of the Metropolitan Life and J. Pierpont Morgan, E. H. Gary, Levi P. Morton and August Belmont of New York. In December, 1923, the Aetna Life Insurance Company, by arrangement, bought from individual stockholders a controlling interest at $135 a share (par $50), since when capital and surplus have been doubled. In the reorganization, Morgan B. Brainard of the Aetna Life is president and Mr. Hewes chairman of the board of directors.

The first of the foreign fire insurance companies to locate its American headquarters in Connecticut was the Scottish Union and National, of which Sir Walter Scott was the first governor. Doubtless, the most notable single event in the history of the company, and one of supreme importance in its future growth, was the establishment of the North American branch during the year 1880, with headquarters at Hartford. Martin Bennett, then president of the Connecticut Fire, was selected as manager, and he guided with consummate skill and rare ability. He was succeeded by the late James H. Brewster on January 1, 1900, Mr. Brewster having acted as assistant manager during Mr. Bennett's entire administration. Notwithstanding the catastrophies at Baltimore and San Francisco, so successfully had the company's affairs been administered and the surplus for protection of policy holders accumulated that, after having paid claims in the

latter city of one and one-quarter million dollars without drafting upon the head office, there remained $1.18 cents surplus for every dollar of total liabilities outstanding. On January 1, 1920, J. H. Vreeland, who had been assistant secretary for a number of years, was advanced to assistant manager, and following the death of Mr. Brewster was appointed manager in October, 1920.

The outstanding event in the present regime is the organization of the American Union Insurance Company of New York, (which began doing business May 22, 1923) with combined assets and surplus of $1,250,000. The administrative offices are located in Hartford, with the Scottish Union & National, the American Union being under the management and control of that company.

As previously noted, the London and Lancashire of Liverpool, England, established its American headquarters here in 1900 when the Orient was acquired but without change of name.

Later came the Prussian and the Balkan, to continue operations only until America's entrance into the World War.

The Factory Insurance Association, comprising leading fire companies associated in organization for the Eastern, Middle and Southern states, chose Hartford for its headquarters.

The Patrons' Mutual of Middletown, started by the Grange, joined the group of companies doing a limited business in 1888. The Hartford County Tobacco Growers' Mutual began operating in 1887 but in 1923 was taken over by the Connecticut Plate Glass Insurance Company of Torrington, James E. Mallette of Torrington, president.

Reinsurance

No history of the insurance enterprises of Connecticut would be complete without a reference to the business of the fire reinsurance companies which are domiciled in the State. Until very recently the companies which confined their business to fire reinsurance were almost entirely those of foreign countries, but of late years there have been organized several American companies which have already assumed a commanding position in this field, and the foremost group, both as regards premium income and surplus, has its head office in Hartford.

The public in general has little knowledge of reinsurance. This is perhaps natural when it is remembered that the fire reinsurance companies never deal with the public. Instead, reinsurance is based on contracts between companies, and the insuring public has no part in it. It has its source in the necessity for the distribution of risks to protect the direct writing companies from the possibility of excessive loss payments from one loss. By dividing the large risks with the fire reinsurance companies, commitments on individual risks are kept to a low figure with correspondingly low loss payments in case of a loss. Formerly the dividing of a risk was left to the assured who had to obtain policies from several companies. This plan was not advantageous to the agent, who in effect, was obliged to admit that other companies issued as favorable and stable policies as his own and it furthermore led to the alienating of the business by reason of the knowledge concerning expirations and other details becoming known to many competing companies. Thus, it became necessary that the companies furnish one policy to an assured to cover the whole risk, and to do this re-

insurance offered a means to carry out that plan. The reinsurance companies are never competitors of the companies they reinsure and the policy particulars are kept scrupulously secret, which operates to protect the company which originally writes the business.

The tremendous volume of business transacted by the reinsurance companies can be appreciated when it is known that in 1923 the net premiums of thirty-five reinsurance companies transacting business in this country were in excess of $87,400,000. Of these thirty-five companies thirteen were American companies, the net premiums of which were more than 50 per cent of the total, or slightly in excess of $44,600,000.

In Hartford is located the principal office of the Rossia group of reinsurance companies. This group consists of the Rossia Insurance Company of America, the First Reinsurance Company of Hartford, the Fire Reassurance of New York, American Fire Insurance Corporation of New York, the Union Reserve and the Lincoln Fire of New York. The last four companies are chartered under the laws of New York State but the administrative offices are in the Rossia building in Hartford. This group has been developed under the leadership of Carl F. Sturhahn who twenty-one years ago introduced to the American reinsurance field the United States branch of the Rossia Insurance Company of Petrograd.

In 1911 the United States department of the Fire Reassurance Company of Paris under the management of B. N. Carvalho joined the Rossia. The Rossia of Petrograd was succeeded in 1919 by the Rossia of America, a Connecticut corporation, and in 1920 the Fire Reassurance Company of New York took over the business of the French company. The American Fire of New York and

THE ROSSIA BUILDING, HARTFORD—ERECTED 1914

The home of The Rossia Insurance Co. of America; The Fire Re-Assurance Co. of New York; American Fire Insurance Corporation of New York; Union Reserve Insurance Co. of New York; Lincoln Fire Insurance Co. of New York; The First Reinsurance Co. of Hartford.

the Union Reserve, the next additions to the group, were organized in 1919, and in 1923 the Lincoln Fire was added. This group writes approximately 35 per cent of the net premiums of all the American fire reinsurance companies combined and holds a strong position in its field.

The First Reinsurance Company of Hartford, which began business in January 1913, with paid-in capital and surplus of half a million each, made manifest that the time had come for this line in the United States. Previous undertakings of this sort had been under foreign direction. Carl Schreiner, English manager of the Munich Reinsurance Company and to be the first president of the new company, said of it: "This is the first company of its kind in America. Hartford is the cradle of insurance in the United States, and as the home of representative companies in all branches of insurance, occupies today a unique and enviable position not alone in the United States but in the world. It is natural, therefore, that in considering the most desirable place for the company, those interested should have sought a charter from Connecticut and have selected Hartford for its home." The incorporators included President Morgan G. Bulkeley of the Aetna Life, President William B. Clark of the Aetna (fire), Vice President J. W. G. Cotran of the Hartford Fire and President Sylvester C. Dunham of the Travelers. The subsequent history will be taken up in the life insurance section.

National Board of Fire Underwriters

There was naught of miracle nor yet the rubbing of an Aladdin's lamp in the development of fire insurance in its first century as it has here been traced. There was

for prime requisite the strength of the men who originated and carried on, but as the country grew and others were attracted toward this enterprise, that strength and that ingenuity had to be applied in ways other than the collecting of premiums, establishing surplus and paying losses. Life insurance had sprung up, easily maintainable because of its scientific basis and "table of experience"; impossible as the task seemed, the work of the fire fiend, irregular, uncertain, spasmodic and treacherous, might and must be analyzed as faithfully as visitations of the angel of death.

When the New York insurance law was enacted in 1849, there were twenty-four companies in that State; in 1865, the number had increased to 109 and in all 145 were doing business there. Companies were being organized by men of no talent for insurance and with more spirit for personal gain than for indemnity for sufferers. To secure the *desideratum* of premiums they cut rates and relied upon guess-work. There could be but one outcome; in 1866, losses which had been on an increasing proportion of income equaled 74 per cent of premiums paid. The strong men then rallied and in 1866 organized the National Board of Fire Underwriters—to work for more uniform rates and compensation to agents and also to drive out incendiarism and to energize for prevention of fire. President Timothy C. Allyn of the Hartford Fire was chosen from among the earnest Connecticut men for vice president. Ninety-two companies and thirty-two "local boards" joined at once. Some of the insuring public cried "Monopoly," but the work of the board soon was sufficient answer; "safety" had been made the watchword. By 1869 losses had dropped to 51 per cent of the increased premium income.

There were periods when laxity of regulation and personal greed threatened the existence of the board. Errors in method having been revealed were boldly corrected. Where premiums had been gauged by existing hazards and losses paid as they might occur, the revival of 1888 brought it about that the object should be to remove hazards, conserve property and thus reduce premiums, while rate-making and compensation should be left with the companies and the local boards. The conservation plan of today embraces maintenance of laboratories whose brand an intelligent public now demands shall appear upon all articles and devices which might conduce to fire; study of building construction; inspection of fire-extinguishing apparatus; campaigns for "clean-up-week"; lectures and printed matter, school essays and prizes, and all that ingenuity and common sense can command for educating the people, together with a national "Fire-Prevention Day."

There are also the National Fire Protection Association, a subsidiary, and now, in its infancy, the actuarial bureau to which nearly 300 companies are reporting their rate and loss experiences with a view to accumulating statistics to get as near as possible to what is the changeful law of fire and human fallibility with it. Especially are such data strengthening for the army of inspectors who seek to visualize their admonitions. Nearly all the Connecticut insurance leaders have been called from time to time to the presidency of the board. Laws, or interpretation of laws of two or three states, have been employed to attack the more nearly scientific principles as being monopolistic in nature, and the expense to the companies has been heavy, but the immutable laws of human interest and self-preservation come to prevail. That rate-making

will be still further improved by intelligent classification is in evidence.

Modern Times

The year 1913 saw two notable innovations. Progress there had been in every detail since the San Francisco horror, and with it an ingenius broadening-out. Pace was kept not alone with man's marvellous inventions, but with the increasing misery caused by the action of the elements of nature among a population increasing so rapidly and with such diversified but closely associated interests. The live stock in the pasture, the crops in the field, the trees on the lawn, the motor vehicles and their extreme possibilities, the furniture, the jewels in the home or in the vaults, the expensively prepared amusements or entertainments which bad weather might interfere with, the gripsack, the trunk, the package in the mail, goods and chattels of all description, whatever could be damaged by riots, explosions, water, hail, ice, faulty roofs, fire-prevention apparatus—practically everything of value or worth can be protected today.

The recognition of the greater scope of regulation fire insurance dates from about the period of 1913. The century-old Hartford became the "Two Hartfords" by creating the Hartford Accident and Indemnity Company, owned and controlled by the Hartford Fire, Richard M. Bissell the president of both, succeeding Charles E. Chase who became chairman of the board of directors. Then came chief ownership in the Hartford Live Stock Insurance Company and in the Twin City Fire of Minneapolis, and large interests in the London Mutual of Canada and the Northwestern Fire and Marine of Minneapolis, in addition to the New York Underwriters' Agency which had been organized previously for greater

freedom of action on the part of agents who sought to cover their territory thoroughly. Meantime many companies of this country and two English companies have been reinsured by the Hartford. The large granite building in "Insurance Circle"—within which circle more insurance of the various kinds was being written than in any other portion of the world of similar dimensions—had to be abandoned for a great area a bit removed from the heart of the city on which was erected a massive structure of white marble and granite with park-like grounds for the sports and games of the force of employees. On December 31, 1923, its capital was $8,000,000, its assets $74,493,584, its reserve for all liabilities $52,379,183, and surplus to policyholders $22,114,400. The capital of the Hartford Accident and Indemnity Company was $1,000,000; liabilities $15,494,947, and surplus to policyholders, $4,447,947.

The Aetna Life Insurance Company in 1913, five years after establishing its Aetna Accident and Liability Company, found that the development of automobile insurance by that company made it imperative to include loss by fire if it would have its coverage complete. Therefore, since neither the life nor the accident and indemnity company under their charters could underwrite the fire insurance, a third company, the Automobile Insurance Company, was incorporated and added to the Aetna group. It began business in April with a capital of $200,000. After a year or two it developed that agents had considerable fire insurance business which came to them through the writing of other lines, which they were placing in various fire companies. Arrangements were accordingly made to encourage the placing of preferred fire business—dwellings, household furniture, churches

and their contents,—in the Automobile Insurance Company. What was then designated as the Residence Fire Department (now known as the "Fire Department") was established at the home office and it followed as a natural consequence that soon after such lines as loss of use, explosion, tornado and windstorm, and the like were added, gradually leading up to the wide range of fire lines as now written. In 1916 the Automobile Insurance Company began to handle ocean and inland marine lines in addition to general fire insurance and four years later an inland marine department was opened. The capital of the company today is $2,000,000 with total liabilities December 31, 1923, of $11,978,738 and surplus to policyholders of $4,526,747.

The Aetna Insurance Company, which, as will be seen farther on, was parent of the Aetna Life, in 1916 announced the beginning of the Aetna Fire Underwriters' Agency, the further to facilitate its great volume of business. Writing of automobile insurance had begun in 1909. The charter had been amended in 1911 to admit of $10,000,000 capital. The following year Ralph B. Ives, who had entered the office as clerk in 1904 and latterly had been chairman of the executive committee of the New England Insurance Exchange, was elected assistant secretary, soon to be sent to the Chicago headquarters of the western branch and eventually, in January 1923, to succeed to the presidency on William B. Clark's being appointed chairman of the board of directors. Director J. Pierpont Morgan, son of Junius Spencer Morgan and grandson of Joseph Morgan at whose famous hostelry the company had had its inception and who himself became a director and the first to make tours of the country, died in 1913 and was succeeded by his son, J. P. Morgan, Jr. History

is read in the figures for the beginning of the year 1924: Capital, $5,000,000; liabilities, $26,001,499; assets, $41,-931,880; surplus to policyholders, $15,930,381. In January, 1924, the Aetna made use of a charter it had obtained by organizing the World Fire and Marine, with $1,000,000 capital, Mr. Ives the president and William B. Goodwin the secretary. The classic office building on Main Street near the center of the insurance circle, was completed and occupied in 1905.

The Security of New Haven, under the management that went into effect immediately following the San Francisco fire of 1906, bravely faced the vicissitudes common to all companies, its stockholders meeting every emergency by reducing and then increasing par value of stock and later issuing new stock at $50, altogether increasing the surplus $800,000 and now making the capital $1,000,-000. True to the conceptions of the Connecticut insurance brotherhood, President John W. Alling and his associates frown down any speculative advance in market value. With the $1,000,000 capital there are assets of $8,502, 583; liabilities, $5,407,576; and surplus to policyholders, $3,095.006. In April, 1923, the Security, by the New Haven Securities Company established a subsidiary company, the East and West, with a capital of $500,000. Also it has the Rockford Underwriters' Agency and the New Haven Underwriters' Agency. The East and West on December 31, 1923 had assets of $1,169,666 with $234,484 in liabilities and a surplus to policyholders of $951,354.

It was in 1913 that the Phoenix allied with itself the staunch old Connecticut Fire, two years after it had guaranteed the policies of the Equitable Fire and Marine of Providence, Rhode Island, and likewise it was to include

the Central States Fire of Wichita, Kansas, in 1921. The stock of these companies is held by the Phoenix Securities Company. The Phoenix was among the first of the Hartford companies to remove from quarters which increasing business made insufficient and to build near the south side of Bushnell Park, hard by the Capitol. This was in 1917. Secretary John B. Knox of the company is president of the Equitable; Roy R. Eblem, president of the Central States; and President Edward Milligan of the Phoenix; president of the Connecticut. Its underwriters' agencies are the Central National of Iowa, the Mid-West Department of Des Moines, the Protector for Canada and the Pacific coast, and the State Insurance Company (Department), Iowa. The Phoenix began the year 1924 with a capital of $5,000,000; assets, $29,397,972; liabilities, $13,247,378 and surplus to policyholders, $16,150,-593.

The Connecticut Fire Insurance Company, with its Connecticut Underwriters' Department, has $1,000,000 capital, and, on January 1, 1924, assets amounting to $13,-794,538; liabilities, $8,764,521 and surplus to policyholders, $5,030,017.

The National, which in 1909 had had to tear down and rebuild on a much larger scale its home office building on Pearl Street, increased its capital in 1912 from $1,000,000 to $2,000,000. Judge Nichols, who had held the presidency since the death of President Howard in 1887, declined reëlection in 1915; he was made chairman of the board of directors and was succeeded in the presidency by Harry A. Smith, a young man who had gained a name for himself. His success in the field had won him appointment as assistant secretary in 1907 at the age of 38, after which his advancement had been steady. He also was

vice president of the Mechanics and Traders of New Orleans, for which the National acts as general agent for a portion of the United States. The National also has the Colonial Fire Underwriters, by guarantee. Its capital today is $2,000,000; its assets December 31, 1923, were $32,200,948; liabilities, $21,099,377, and surplus to policyholders $11,101,571.

The Orient in 1913, with a 100 per cent stock dividend, raised its capital to its present figure, $1,000,000. As occasion required, its charter was amended until now the company is authorized to insure against any and all hazards which come within the province of fire and marine insurance companies. President Archibald G. McIlwaine is also United States manager for the London and Lancashire which holds the controlling stock in England but as no part of its assets in America. The English American is its underwriters' agency. On December 31, 1923, the Orient had assets of $6,369,114; liabilities of 3,367,983 and surplus to policyholders of $2,001,130. It was the first of the Hartford companies to cross Bushnell Park and build, in 1904, on Trinity Street near the Capitol, the oriental design of the structure being particularly appropriate and impressive.

The Standard, acquired by the Aetna group in December, 1923, increased its capital in May, 1924, from $500,000 to $1,000,000 and at the same time an equal amount was paid in for surplus. Under the former regime, December 31, 1923, its assets were $1,590,817, liabilities, $903,423; and surplus to policyholders, $687,393.

The Rossia in 1913 was completing its new home at the corner of Farmington Avenue and Broad Street, an adaptation of the *Petit Trianon* at Versailles with suggestion of the home office of the original company at St. Peters-

burg. The story of development as a reinsurance company has been told. The company's own capital December 31, 1923, was $1,200,000, its assets $9,492,434, its liabilities $6,570,356 and its surplus to treaty holders, $2,922,-077. The other companies in the group showed $11,591,-539 in assets and $2,988,529 in surplus to treaty holders.

The First Reinsurance Company, which, as has been seen, has strong backing of various companies and will be considered further in the subsequent analysis of life insurance development, on December 31, 1923, had $500,-000 capital, $4,342,359 assets, $3,121,508 liabilities and $1,220,850 surplus to policyholders. In addition to fire and allied classes of insurance, it is doing a rapidly increasing business in life reinsurance and in casualty classes, accident and health, fidelity, surety and burglary and theft.

The combined capital of the Connecticut stock companies on December 31, 1923, was $27,700,000; assets, $239,807,559; liabilities, $153,076,035; surplus, $59,-031,524; net amount at risk, $25,717,280,661. Their net losses that year were $81,773,868,524—or that much in one year to help maintain the country's credit and progress despite the power of fire. To these totals should be added those of the mutual companies, as follows: Assets, $4,863,926; liabilities, $1,063,055; surplus, $3,800,-871; net amount at risk, $161,000,176.

Further with Connecticut as the headquarters, there is the record of the foreign companies. The Scottish Union and National adds thus to the totals: Assets, $8,319,009; liabilities, $4,738,093; surplus, $3,581,006; amount at risk, $900,250,595; net losses 1923, $1,838,045; and the London and Lancashire, assets, $9,420,859; liabilities,

$4,412,970; surplus, $4,007,888; amount at risk, $856,-497,379; net losses 1923, $1,649,498.

In a word, with Connecticut as a base where a few individuals at the time the Constitution of the United States was being written were undertaking to protect neighbors and local enterprises, property throughout the land today to the extent of over $27,635,028,811 is under protection, with assets of $261,411,353 and a surplus of $70,427,289 available, over and above capital; and from and through these companies in the year 1923 alone went $81,777,689,-671 toward alleviating distress and to enable humble individuals and great corporations alike to "carry on." What is utterly destroyed is gone forever, causing that much diminution of the world's wealth, but such insurance as this enables man to renew and press forward to still greater achievement.

Life Insurance

Valuation of the earning power of an individual did not occur to mankind at as early a date as did the valuation of property, especially ships, which indeed were exposed to the most peril. This is not so strange when one reflects that it was not until very recent years that it was comprehended by any considerable number of people, and even today—as probably will be the case forever—it is necessary to have well informed men go to individuals to tell them the importance of such valuation.

On June 18, 1583, in England, William Gibbons took out the first written life insurance policy of which there is any record. It was for one year at a premium of 8 per cent. He died May 29, 1584. Payment was refused on the ground that he had lived twelve lunar months. The

courts, thus at the very outset, began deciding against the insurers, and in this instance most properly.

Quaintly curious men, as far back as John Gaunt in 1601, began searching for a possible law of mortality by examining death records and graveyards, and what with the researches of Dr. Edmund Halley in 1693 and others, Dr. Richard Price in 1780 compiled a table of mortality which became the guide for the Equitable of England, the oldest company in the world, and likewise the slowest because it is permitted to take only such business as comes in over its counter. With that table as a basis, experience attested that there were laws of mortality sufficiently dependable to warrant premium rates on large classes according to age. Insurance of ten men or a hundred men reveals no law and is impracticable, but when the statistics of a hundred thousand men at given ages are compiled it becomes possible to say approximately what each should pay yearly to establish a fund large enough to cover expenses and pay all claims as each succeeding year goes by. The "table of mortality" long since took its place among the scientific dogmata of intelligent people.

America had been too absorbed in fighting for existence and then for independence to investigate this possibility of general rules of mortality. The Presbyterian Ministers' Fund, chartered in 1717 and beginning business in 1759, was the first and stands today as one of the best companies in the country, greatly modified in principles but still restrictive of its business. In New England an insurance contract was now and then agreed upon prior to 1800, usually by individuals who were working out the plan of marine and then of fire insurance. Certain trust companies began to take chances on men's lives, but it was not till 1835 that a strictly life insurance company was

organized, the New England Mutual of Boston, and it did not venture into the untried field till 1843, or until two years after the New York Life and one year after the Mutual Life of New York were incorporated. By 1850, the total number of companies was eleven. By 1867 the $1,000,000 of combined assets of 1843 had increased to $124,000,000, and almost all of that represented an ignorance of either the real principles or the real purposes of life insurance.

The story of the development of one of the noblest conceptions of the human mind can be traced directly and relatively by the story of the Hartford companies. In no part of America perhaps more than in New England was there a sentiment that it was ungodly to speculate on the length of life, to interfere with the plans of Providence. There were clergymen who denounced it from the pulpit. But especially among Hartford men who had realized the beneficence of protection of property there was pronounced interest in what was being done in England and a consequent endeavor to peer into the future. As "Lloyds" in London permitted any man to put up a wager on the life of any fellow man, it must be admitted that conception of gambling was conspicuous in those earliest days before life insurance began groping for some other *raison d'être* than a form for making money; nor was that conception to disappear until there had been some chastisement.

The spirit of tontinism found no encouragement among hard-headed Connecticut people. Named after an Italian count and popular in France in the eighteenth century as a means of securing subscriptions for government purposes, it actually brought out the virtue of life insurance by contrast. Money contributed by a group went to the

survivors after the deaths of others before a fixed date. It was a reward to those living for having lived while insurance was an alleviation to those who lost by the death a contributor. The tontine principle was to be resorted to in subsequent stressful times and eventually it did serve a purpose in conservative companies for the distribution of surplus interest earnings at certain periods, of five, ten, fifteen years, but even that was wiped out by the laws.

The vital principle which was to be worked out by experience was the investment of contributions or premium reserves as sacred trust funds computed to yield a good share of the total requisite and to be ample for meeting whatever emergency might develop the next year or fifty, perhaps a hundred or more years later. Herein was the fine distinction between fire and life insurance. In the former, a premium covered for from one to three years, and then the insurance must be renewed. In life insurance, it came to be demonstrated, there must be a fixed premium—a "level premium"—than which the insured should be obliged to pay no more through the succeeding years. In the process of demonstration, tontinism and assessmentism—the latter revealing more pertinacity—fell by the way. Estimation of what would be needed by a group, and that group enlarging or contracting, with a provision that if the amount were not enough, the balance should be collected by assessment, had to yield to the method of determining by the mortality table and by the rate of returns on investment what amount of premium, according to the age of the insured as an entrant, should be necessary.

This meant science, for which the conditions lent themselves more readily than they could in fire and marine insurance. And the advancement of the science was to make

possible forms of insurance well nigh incomprehensible at this day to those to whom it is not carefully explained, satisfying designs for protection even unto future generations, and all dependent upon the absolute solidity of the great institutions handling the funds.

What this was to mean for the world, not only in the way of mitigating the horror of death, but in furnishing bone and sinew for the nation, the founders never could have dreamed. With petty combined assets of $2,000,000 and insurance of $8,000,000 in force, it was beyond human faculty to imagine the present sums of nine and a half billions in assets and fifty-six billions of protection guaranteed.

Reflections such as these add interest to the story of the simple beginnings. Names of those prominent in fire insurance progress are conspicuous here. Dr. Pinckney W. Ellsworth and James L. Howard of Hartford, who had looked into life insurance, in embryo, preached their faith, Howard offering his services to secure this good thing for his fellow townsmen. This was in the early Forties. Dr. Gray R. Phelps, whose drug store was a club-like rendezvous, and Elisha B. Pratt joined Ellsworth and Howard in holding forth like evangelists, and the natural sequence for men of enterprise was the procurement of a charter from the Legislature in 1846.

This was to be the Connecticut Mutual Life Insurance Company. The first board of directors included the president of the Aetna Insurance Company, Thomas K. Brace, and men who were then or who were to become prominent in the different branches of insurance. Eliphalet A. Bulkeley, lawyer, judge, banker (one of the founders of the Aetna Bank) and statesman and of a family distinguished in the State's history, was made president; Dr.

Phelps secretary and soon vice president. The company's name expressed the choice of these men as to the method for conducting the undertaking. It was to partake of the nature of a mutual assessment company, certainty of required premium not yet having been established. But then and there it was decided that there must be a fund —$50,000 seemed sufficient—as a safeguard, and then it was safe to say that $100 a year should guarantee protection for wife and family. Borrowing from the methods in fire insurance, it was voted that the insured could pay all or part of the premium by notes, and the assessment, if necessary, could be levied on them. Losses, expenses and earnings were to be shared each year. This note feature, emulated by other companies, carried through to its climax in 1870 when their face value was $12,000,000, and then began to decrease for reasons which the history will reveal but which could not then be surmised.

The $50,000 was in the shape of notes apportioned among nineteen subscribers, for five and ten-year terms, and by 1856 they had been fully retired by applying the profits, no assessments having been imposed. When the office was opened December 11, 1846, $100,000 in applications was on the desk. The following year President Bulkeley, Major James Goodwin and William T. Hooker, who later was to become president of the Guardian Mutual Life of New York, were the finance committee appointed to supervise investments. Major Goodwin in particular was industrious in charting the uncertain seas of finance and also to act as helmsman for the company from January, 1848, to 1866, and again, on the death of his successor Dr. Phelps, from 1869 till his death in 1878. Through his wife, daughter of Joseph Morgan, he was associated with the eminent financiers of the family of

Morgan and like them displayed genius, particularly in recognizing the new West as a field to be cultivated.

To get the true history of the hour of Connecticut's first life companies, it must be remarked that, while insurance corporations like others were required to report to the legislatures for publicity's sake and then, first in Massachusetts by the law of 1818, to report in other than home states, and finally, first in Massachusetts by the law of 1852, to be subject to examination by an insurance commissioner (or originally three of them); and that, while legislative attempts were in the line of making the capital secure ($100,000 as a minimum) by limiting investments to government securities and to corporations, real estate and funded town or city or state debts, all within the individual home state, little attention was paid to method of investment of accumulating funds, and the need of a legal standard reserve was something for the future to reveal. The Connecticut Mutual's charter permitted it to invest in mortgage loans and in collateral loans on state bonds and bank stock. From the beginning and to this day, perhaps due to the standing of the citizens engaged in the business, the Connecticut Legislature has been guarded, cautious and conservative in the framing of restrictive laws.

As to the reserve, that was something for each company to calculate as it calculated its premiums. Experience and competition would take care of that feature, even as in fire insurance, nor was the leaven of mortality statistics fully operative. Interest rates were beginning to rise and were to continue to rise through the war period beyond the point of unestablished anxiety. For returns from investment, stock companies would have dividends to shareholders as an incentive and mutual companies the same

for policyholders. Actual liabilities were not then entering into computation. The Connecticut Mutual apportioned its surplus earnings on a uniform percentage of its premiums, and continued so to do till 1869 when the demonstration was accepted that the older policyholders were discriminated against, and at the same time the distribution plan of Shepard Homans of New York was worked out for such share in the earnings each year as each policyholder's payments entitled him to—the practically universal standard since then.

An actuary in the early days was considered an expensive and readily dispensable adjunct. James A. Ayrault held the ornamental position in the Connecticut Mutual a short while. But it was not many years before the actuary was to be needed by all companies to bring order out of confusion and thenceforth to wield the bludgeon against all forms of delightful but deadly necromancy.

Thrift is noted as a watchword in the Connecticut company. It was not common to all companies; it created resentment against the Connecticut Mutual management and then revolution in Boston and New York branch offices which preferred to set their own limit on their expenses for advertising and to publish their own "literature"—which was and still is the generic name for circulars. The home office fought and when election day came around, the vice president, the New York manager and others had resigned; Goodwin was reëlected almost unanimously and his board of directors with him. An analysis of this board has significance. William W. Ellsworth was secretary of the Hartford Fire in 1817, was Congressman 1829-33 and Governor 1838-42; Edmund G. Howe, director in the Connecticut Fire; Samuel Woodruff, manufacturer, to be president of the Putnam Fire

in 1865; Simeon L. Loomis, one-time secretary of the Aetna, president of the Phoenix in 1855, vice president of the Aetna Life in 1865; William E. Dodge of New York and Henry Z. Pratt of New York, vice president of the Aetna in 1862.

Judge Bulkeley, the first president of the Connecticut Mutual, had held among other positions that of counsel for the Aetna (fire). Interested in his experiences in life insurance, he recalled having seen in the Aetna archives an amendment of 1820 to the charter, permitting the company to write annuities and insure lives after it had established a separate department with capital of $150,000. The plan of mutuality was working well; with the assurance of such men as constituted the directorates of the various companies in Hartford, and with facilities at hand requiring only a bit of polishing up by the General Assembly, the judge and his associates opened the annuity department of the Aetna June 11, 1850. Judge Bulkeley, having resigned the presidency of the Connecticut Mutual, was vice presidential chairman of the directors of the department. Premium tables were on the stock or proprietary basis. Business came so auspiciously that in 1853 a charter was obtained by which this "Aetna Insurance Company Annuity Fund" merged into the Aetna Life Insurance Company, with $150,000 capital (ten per cent cash and notes for the remainder). Judge Bulkeley was elected president with a board of directors including the familiar names of Henry Z. Pratt, Austin Dunham, Mark Howard, Roland Mather, Simeon L. Loomis, John W. Seymour and W. H. D. Callender.

During its first year the company issued 524 policies. The business continued at a very moderate rate until the year 1861, when it began the issue of "participating"

policies, or policies that shared in the net earnings, and in that year about 700 policies of this class were written. The premiums on these participating policies were allowed to be paid one-half in cash and one-half in notes bearing 6 per cent interest, with the understanding that such surplus, or dividends, as might be earned by the company on the participating business would be applied in the reduction of those notes on and after the third policy year. Thus was the first stock company in Hartford drawn back to the "mutual" idea but later, as will be seen, to utilize both methods.

In absolute chronology, two companies antedated this offspring of both the Aetna and the Connecticut Mutual. They played no progressive part in insurance history, but each carried a lesson. One of them hardly should be dignified by being named with insurance companies, but it was started and fostered by a man who later was to have the duty of supervising insurance in Connecticut, Benjamin Noyes of New Haven. The company was the American Mutual, incorporated in 1847 with a charter that completely deceived the unsuspecting, including not only legislators and Governor Isaac Toucey, but Professor Benjamin Silliman of Yale whose name still stands among the foremost of the world's scientists and who was the company's first president. Associating with the scheme other men of prominence, the clever Noyes brought it about that the company, under no safeguard, should have dangerous privileges. Noyes figured on earning 6 per cent on all funds and that not over 4½ per cent would be required for maintaining the reserve. The margin of profit was to be large. It proved not to be. Insurance applications came in but financial conditions disturbed the keen mind of Commissioner Elizur Wright

of Massachusetts and both Massachusetts and New York shut out the concern. After President Silliman's death in 1864, Noyes got into the presidency and, the next year, into the position of head of the insurance department which it had been decided to create. In 1871, by legislative consent, the company erected the famous "Insurance Building" on Chapel street in New Haven, on land leased of Trinity Church.

That year the name was changed to the American National Life, and a most peculiarly cunning charter which Noyes had worked through the Legislature in 1866 was slipped into, officers remaining the same. Capital was to be from $100,000 to $500,000 and it was represented that $125,000 was in hand. Dr. George S. Miller, the first regular insurance commissioner, perceiving discrepancies, put a stop to the company till it should provide a "guaranty capital." This demand was complied with in 1873, and, by legislative authority, the state treasurer passed on to the new company the securities deposit of the old company, accepting in its place an equal amount of securities of the new company. The series of remarkable financings continued. The National Life of New York was reinsured but New York would not surrender the $100,000 deposit, which Noyes was after inasmuch as it was practically all the National had. In response to complaints of policyholders Commissioner John W. Stedman of Connecticut made an investigation of compromised death claims and found a large deficit and, according to the law, went to court for the appointment of a trustee. His petition was dismissed. At once he laid before the Legislature his evidence of fictitious shareholders and hopelessly insufficient assets, not a dollar of stock having been paid in, to which Noyes replied that under the charter the direc-

tors were permitted to omit that customary business detail. Noyes's check-book subsequently revealed that out of the company's funds he paid $27,000 in this battle, with result that he was given till September to establish financial standing.

When Noyes failed in this, Commissioner Stedman prepared to act but was stopped by injunction. After a hearing under a special act, Chief Justice Park and Judge L. F. S. Foster of New Haven found a shortage of $50,000, crediting the company with the New York deposit which then amounted to $121,000. In five days, the company's officers reported that the $50,000 had been paid in and the commissioner was compelled to permit business to continue. Noyes bought for $4,000 the charter of the defunct National Capital Life of Washington, juggled borrowed securities, made it appear that the capital of the Washington company was resubscribed, had the latter assume the assets and liabilities of the New Haven company and, as president, undertook to reinsure the New Jersey Mutual. There he was held up and sent to prison for eighteen months. In Connecticut a receiver was appointed with the outcome that the state took a mortgage for $100,000 on the "Insurance Building" in New Haven and released all the securities and other papers it held. In 1893 the receiver, having paid creditors a total of $66,875, closed the trust.

The other company of the earliest period was incorporated in 1848 as the Connecticut Health. This is notable as the first instance in Connecticut of insuring against disability from sickness which in modern times plays an important part in insurance annals in Europe and America. But what we have of it today, usually in connection with other kind of insurance, is the result of long and

painstaking study of conditions, experience and requirements. The principle appealed to a group of Hartford men of exceptional intelligence and experience in other affairs but not in insurance. The Hon. James Dixon, congressman at that time and senator later, was the president; William T. Hooker, afterward president of the Guardian Mutual of New York, was vice president, and Henry L. Miller—like Mr. Hooker, associated with the Connecticut Mutual—secretary. After only a year of trial, the health plan was abandoned and the company became the Hartford Life and Health and then the Hartford Life. In some manner it was led into the strange and disastrous field of insuring shiploads of slaves. Neither then nor later was there much to base estimates upon in that line, and proofs of loss of men whose names had little significance or personality were of an intensely imaginary value. Withdrawing from New York and Massachusetts in 1857, business was wound up, painfully.

The Charter Oak Life Insurance Company, destined to become in more ways than one a marvel in history, opened its books for subscription to $200,000 capital on August 3, 1850, and the stock was oversubscribed nearly five-fold. A feature made prominent in this company was the insuring of husbands for the exclusive benefit of wives and children. The emphasis thrown upon this in the charter is like a sidelight upon the growing tendency of the times to depart from the principle of "insurable interest." With that faith which experience too often shatters, and not without example from the mother country, it was not sought to discover then as it is now whether the beneficiary under the insurance was one who would have a natural desire that the insured should live—with all that that signifies. Moreover if the one having such

desire also was dependent upon the insured, the chance that nature's course would be interrupted by human greed was negligible. Of the company's stock three-fourths must be in mortgages, in United States or state securities or in bonds of New York, Boston or the cities of the home state and the balance in one-year promissory notes.

Gideon Welles, editor of the "Times," and to become, after change of political faith, the great secretary of the navy in Lincoln's cabinet, headed the list of directors and was chosen president. Others were Calvin Day, Tertius Wadsworth (later an officer in the Phoenix Mutual Life), Erastus Smith (director in the Phoenix fire), Lucius F. Robinson and James G. Bolles. By this time stock notes were not looked upon with favor in other states where makers of the notes were not as conscientious as Connecticut men had proved to be. Accordingly, this company sold part of its notes at a discount, repurchased them a year later at the original price, making up the difference from the year's profits, and sold and resold again. Mr. Welles was succeeded as president by James C. Walkeley in 1855 and with a field force of excellent character the road to prosperity seemed clear. What the future had in store will appear in regular course.

The desire to broaden the field of insurance and at the same time make it a handmaiden of a righteous cause, to bring out the sense of brotherhood and to hold up the hands of the elect was the prime purpose in establishing what was to become the Phoenix Mutual Life. If, as it was now accepted, there were certain laws of mortality, gathered from English mortuary records, why, it was reasoned by many, should there not be other and perhaps more accurate laws than yet had been discovered? The temperance crusaders who by now were conquering a

New Home of the Phoenix Mutual Life Insurance Company, Facing Upon Bushnell Park, Hartford, Connecticut
This company has rendered almost seventy-five years of uninterrupted service. It was organized in 1851.

large part of the country, preached, the physical as well as the moral and financial benefit that came from abstinence. If they were sincere they must believe that abstemiousness would mean longer life. And this was in alluring harmony with the growing desire of men to carry insurance, and likewise to reap all the rewards at virtue's disposal, including financial; if temperance prolonged life, current premium rates could yield larger profits for those concerned, or this rate could be lowered without fear. It was a "new idea under the sun" but it was an age when new ideas were yielding fruit.

With it all, here was a way to overcome the evil of premium notes, already beginning to make itself apparent; temperance people would be in a more prudent and thrifty class and gladly would pay full cash. The idea as a whole appealed powerfully to men of the caliber of the aged Thomas S. Williams who had been honored with high offices and for eighteen years was chief justice, welcoming now the dawn of a new era; of Francis Gillette, sturdy abolitionist as well as temperance man and to become a United States Senator; of Francis Parsons, a leader at the bar; of James B. Hosmer whose philanthropy is marked by many memorials in Hartford; of Edson Fessenden, an original director of the Connecticut Mutual and proprietor of that Eagle Hotel where many insurance plans had been conceived; of the Reverend Benjamin E. Hale, the energetic editor of the leading temperance journal, the "Fountain," and of Barzillai Hudson, prominent in all good works. They estimated that temperance people of both sexes could have their insurance at about 10 per cent less than the prevailing cost and withal—and here was the inception of group in-

surance—lodges and societies throughout the land could be insured together.

In 1851 they obtained their charter for the American Temperance Life Insurance Company with a capital of $100,000 to $200,000 which was at once heavily oversubscribed. Mr. Hudson was the first president, soon to be succeeded by Mr. Hale and he by Mr. Fessenden when Mr. Hale was sent forth as general agent with power to write policies without having to submit them for approval of the board. The Reverend D. H. Merrit was the first agent appointed for the whole State of Connecticut. In the application, the prospect had to answer affirmatively this question: "Is the party aware that the habitual use of intoxicating liquors as a beverage at any future time, and that any untrue or fraudulent allegation, made in effecting proposed assurance, will render the policy void, and that all payments of premiums made thereon, and dividend credits accruing therefrom, will be forfeited?" Circulars were sent to all the divisions of the Sons of Temperance, offering wholesale insurance which incidentally should serve to strengthen the ties of brotherhood; only those below the age of 50 would be accepted and they in classes of ten, at premium rate of $1.50 a year for $100 with $500 as the maximum, as against the regular rate of $2.06 plus $1 for the policy as of age 34. Each division would pay the examiner's fee which would be not more than 15 cents when ten or more were applying.

Expectations were being realized when the temperance enthusiasm began to wane, simultaneously with the discovery that insurance principles lie deep and also that there may be diverse opinions as to "habitual" use of liquor, as to what constitutes a "beverage" and as to what

is "intoxicating"—even as in 1924. The directors in adjudging claims entertained conscientious and troublesome doubts as to whether the "pledge," which was a part of the application, had been kept. Satisfied after a fair trial that, however correct the theory, the application of it ran counter to the inclinations of human nature, the managers abandoned the temperance feature in 1861, conformed the rates and contracts with the common practice, and with legislative permission changed the name to the Phoenix Mutual Life Insurance Company. It is to be noted in the study of these early experiments that many of the risks taken under the original plan remained long on the books, some even to this day, on the whole perhaps justifying the point as to the longevity of the total abstainer. The gross receipts in 1861 were $262,088; the previous years' premiums had amounted to $48,704 and the sum of investment earnings was $10,749. Caution and prudence had laid a good foundation for the future, entered upon with a particularly appropriate name.

Standardizing Policies

The period of the Civil War, as have other war periods, brought prosperity for life as well as fire insurance. Interest rates are higher at such times, there is more visualizing of the need of protection, and money for those who earn or invest it in certain lines is easier. The number of companies began to increase and soon there were signs of that rush and speculation for which heavy toll was to be collected a little later.

Connecticut remained calm through this, and that too without the restraining power of drastic legislation. Only one company was chartered, the Continental, in 1862, and this one was to lie dormant till the spring of 1864.

Of the capital of $150,000, increased to $300,000 in 1866, 40 per cent was cash and the balance was in these persistent stock notes. The ease with which the notes were forthcoming and the official dislike for them engendered by wrong-doing in other states was to have illustration in this instance in the Seventies, as will in due course appear. John S. Rice of Farmington was the first president and Samuel E. Elmore secretary, two men who were to continue as exponents of the ideas of the founders as against those of men from Windham who finally were to prevail.

Under Elizur Wright, the Massachusetts insurance department was crystalizing the ideas which were being worked out by the genuine pioneers, reducing elements of chance, strengthening the position of the policyholder and altogether shaping those foundations which should give permanency and popularity to life insurance. Massachusetts was the first State to fix a standard for the valuation of policies and set forth explicitly the inherent right of the insured to equitable ownership of that portion of his premiums which, under the standard of valuation, had to be set aside as reserve. He could not or did not revise the misleading expressions which were creeping into the insurance language, like "reserve," "surplus" and "dividends," but he formulated the terms for common office acceptation. It already had become clear that from each premium paid, a certain sum over and above palpable disbursement for any purpose must be set aside as a "reserve" which, calculated at a chosen rate of interest, should be sufficient, as of a given age-group, to meet obligations to that age-group when and as the reserve was improved at compound interest of the chosen rate. As has been seen such rate might be 4½ per cent; that

is to say, the company's assumption might be that the reserve set aside, let us say in 1860, would always earn that amount of interest. Fluctuation of interest rate with increase of gold in the country or with changing demands for capital gradually forced the chosen rate down to 3 per cent for most companies by the beginning of the present century, though there are signs of 3½ per cent today.

It is obvious that the higher the rate, the less the amount that has to be set aside for reserve, which to the policyholder who would realize on his policy before it matures means a less cash or loan or paid-up value or period of extended insurance. But the company's main thought must be not to set a rate higher than can be maintained for policies of a given year through an indefinite future. If this rate proves lower than what actually is earned by investments and by thrift, the excess earning goes to the stockholders in a stock company and to the policyholders in a mutual company. The indefiniteness of the future is sufficiently qualified for commercial purposes by the table of mortality previously defined. The table now in use is the American Experience Table in the place of the Combined or Actuaries' Table (of seventeen British companies) in vogue when in 1858 the Massachusetts commissioner fixed upon 4 per cent as interest assumption to establish a solvent condition of valuation.

New York was giving special attention to the character of investments. The early-times sentiment that the funds should be employed near home—not so pronounced in Connecticut—which was coming to mean that they should create a market for local issues of securities or local enterprises, was yielding to pressure of common sense, but, in that realm, and in taxation, new problems were developing, each to be met somewhat crudely.

Connecticut herself had not seen the need of laws to prevent "wildcatting." What had been in evidence elsewhere, however, was enough to cause her in 1864 to establish a form of an insurance department, and in 1865 Benjamin Noyes (of the ill-fated American Mutual) was put in charge, a man of wide acquaintanceship and much popularity. The department was not regularly established till 1871, after the experiences which made it imperative that all companies coming into the State to do business as well as the State's own should have scientific attest. Dr. George S. Miller, one of the most forceful members of the House of Representatives, where he sat as a member from Enfield, was appointed to the office, and to aid him in the unfamiliar and feebly outlined work ahead, he secured John M. Holcombe, a young Yale graduate then in the actuarial service of the Connecticut Mutual, for the first actuary, later to become president of the Phœnix Mutual.

It might be said that the advent of the Connecticut General Life Insurance Company in 1866, at a period when less liberty of action and more exacting requirements—if men were honest and sensible—were the rule, was due to the restlessness of the brain of Dr. Guy R. Phelps, who had been instrumental in founding the Connecticut Mutual and who at this time was the president of that successful pioneer company. The reason he advanced for a new company was one which was not long to encourage men at that stage of progress, but yet was one which today is asserting itself in many of the most conservative companies. It was this, that insurance was not discharging its full mission of beneficence while it was restricting itself to healthful risks, the impaired risks should be allowed to share in the blessings. And this, too, before experience of his or even the older companies had

THE CONNECTICUT GENERAL LIFE INSURANCE COMPANY

Organized in 1865, issues life, accident and group insurance. It is one of the most successful and rapidly growing companies in the country. R. W. Huntington is president. Its new building is on the south side of Bushnell Park in Hartford.

attested the worth of any method of selection or table of mortality.

Dr. Phelps' argument carried conviction to the minds of men foremost in the affairs of the city and State as seen by these names on the list of directors after the charter for the Connecticut General was obtained in 1866: James M. Niles, Edward W. Parsons, Thomas W. Russell, Ebenezer N. Kellogg, George D. Jewett, James G. Batterson (who was starting the Travelers on its course), Charles M. Pond, Leverett Brainard, William G. Allen, Francis B. Cooley, Charles T. Webster, Henry J. Johnson, and representatives from Chicago, Cincinnati, Philadelphia, Baltimore, New York and Boston. But these men soon were to find that they had not reckoned with that human trait which causes resentment upon rejection for disability and the consequent aversion to paying the necessary higher rate by reason thereof; there had not then been the experience and education which now cause the unfortunate to appreciate their situation and, in greater or less number becoming greater, accept what they can get. Two other companies in the country, starting at about the same time on this plan, persisted but had to yield to the inevitable.

One thing essential to substandard insurance clearly was a large capital and $500,000 was fixed upon for the Connecticut General. Of this 50 per cent had been paid in in cash in 1866, but when the company changed to the regular plan of insurance, not calling for so large a capital, the charter was amended so that only $250,000 was required (in 1874) and the company was the first to have its capital all in cash. James M. Niles, the president, was soon succeeded by Edward W. Parsons. Thomas W. Russell, who had been vice president of the Charter Oak,

accepted the secretaryship. He was to succeed President Parsons in 1876 and to continue to hold the office till his death in 1901. Adopting a policy of somewhat restricted territory and great caution, the company was to go on slowly and modestly, but surely to great success, writing both "participating" (or mutual) and "non-participating" (or stock) insurance.

The Hartford Accident Insurance Company came into existence in 1866, with combined purpose of insuring lives and indemnifying for general accidents. There was appreciation of the need of the latter, but inasmuch as the study that men like James G. Batterson were giving to it had not yet reached conclusions, the company speedily confined itself to the beaten path and in a year was the Hartford Life and Accident, and in 1868 the Hartford Life and Annuity. The experiment, under President T. J. Vail, was expensive. Through Chester Adams, the presidency passed to C. C. Kimball, whose success drew outsiders to the management which Mr. Kimball and his associates were willing to pass along, with results none too gratifying till Secretary Stephen Bell, under the presidency of E. H. Crosby, instituted economy and foundations were laid for the introduction of a new plan in 1880, as will be seen.

Other Insurance

As though the mastering of the principles of fire and life insurance were not enough for men of Connecticut, the "Hartford Wits"—and the term may properly be borrowed from the circle of literary geniuses of the early part of the century and applied to the geniuses who were to give the State fame the world over—were at work upon other methods based upon the fundamental principle of distribution of the burden of loss. Changes from

oxen and horses and from horses to steam power for locomotion had brought new sources of loss of life, and like changes in generating power for the fast developing industries had added materially to the loss of property as well as of life.

James G. Batterson's name, as has been seen, appeared as that of one of the promoters of the insurance ideas represented by the different Hartford companies. Mr. Batterson's life itself was a remarkable history. Born in Bloomfield in 1823, he prepared for college, learned printing, studied law, helped his father chisel out monuments in Litchfield and Hartford, built some of the leading structures of stone in New York, Hartford and many other places, including great insurances offices, capitols, city halls, banks, hotels, mansions and the Congressional Library, and operated the most valuable quarries in the country. Meanwhile he was perfecting himself as a scholar in the ancient languages as well as the modern, was travelling extensively, was writing in science, sociology, philosophy and political economy and was a connoisseur in art. Withal, even in his old age, he would drop into the office of the "Hartford Courant" at midnight, seat himself at a reporter's desk without a word and soon turn in an admirably suitable and eminently acceptable account of some meeting he had attended or some incident that had occurred, and depart as silently as he had come.

When travelling in England in 1859, he bought a little ticket by which the Railway Passengers Assurance Society of London agreed to indemnify him to the extent of £1000 if he met with accident on that particular train. It interested him. He visited the eminent English actuary, Cornelius Walford, who confirmed his belief that

this plan could be extended, with experiments as to necessary rates, to cover occupational accidents and with a compensation feature. Returning home he talked it over with the groups who liked to foregather with him, including insurance men like John L. Bunce, Gustavus F. Davis, Elijah H. Owen, James L. Howard and W. H. D. Callender, Editor Alfred E. Burr of the "Times," Henry Keney, merchant and capitalist, Charles F. Howard, W. L. Collins, George Sexton and George S. Gilman—all of them men very active in civic life. And those here named were the directors of the Travelers Insurance Company, which was incorporated for accident business June 17, 1863, and began business in April, 1864, by giving President Batterson $5,000 insurance. He previously had insured Banker James Bolter in the sum of $5,000 for 2 cents against accident while going from the post-office to his home on a street four blocks away.

It was one thing to convince the men familiar with Mr. Batterson's mentality, but another to convince individuals and the guardians of insurance in sundry commonwealths. Mr. Batterson left this in large measure to an efficient office force, including Rodney Dennis, secretary; George Ellis, actuary (who had to feel carefully the experimental path of rates), and Major E. V. Preston, who today survives the group. Nor should the name of Dr. John B. Lewis, for forty years the medical director, be omitted from the history. In 1865 the Railway Passengers Assurance Company of Hartford was organized as a constituent company, while a series of railway accidents turned public attention this way. Incidentally, also, it attracted the attention of certain others who fancied they saw money in such undertaking, nor was the field substantially cleared till the Travelers had extended its pro-

tection over those who had not utterly destroyed themselves. By 1871, no other independent company survived and in 1878 the Travelers turned the Railway Passengers, in which seven companies originally had found safety, into its regular ticket department.

The original capital of the Travelers, $200,000 was increased by one-fourth at the first meeting of the directors and was made $500,000 in December, 1865, with a 25 per cent dividend.

It was in October, 1865, that the directors voted to take up life insurance also, on the stock or non-participating plan. Rates were low, business good, but there were times when profits from the accident side of the business were helpful, until the company was well on its way to the position it now occupies among the giants.

To the Polytechnic Club is due the credit of originating the Hartford Steam Boiler Inspection and Insurance Company of Hartford. Pressure of industrial demands had produced increased pressure of steam, and with terrible results which had been accepted as unescapable concomitants or "acts of God." In reality, knowledge of steam was limited. Popular conception went back only to Watts and his kettle lid in 1760, wholly unacquainted with the device of Hero of Alexandria a hundred and fifty years before the Christian era, with the discoveries in the ruins of Pompeii and with the steam generators of Newcomen in 1700. The earnest students who comprised the Polytechnic Club of 1857 to discuss mechanical and scientific problems included Professor C. B. Richards, who came up from Yale; Elisha K. Root, who became president of Colt's Patent Fire Arms Company; Francis A. Pratt and Amos W. Whitney, founders of Pratt & Whitney, and Jeremiah M. Allen. The "mystery" of

boiler explosions they were determined to solve. Assuming reasonable construction, their conclusion was that frequent inspection was the remedy for the evil. In England meantime men were adopting an inspection method in connection with companies that gave certificates relieving them of the charge of carelessness. In the atmosphere of insurance in Hartford, it was natural that these Polytechnic Club members, though none of them insurance men, should speculate on the possibility of adding an indemnity feature to the certifications.

The seed was planted but did not germinate till after the distractions of the Civil War. Eminent manufacturers and business men were interested—Frank W. Cheney, Charles M. Beach, James G. Batterson, Marshall Jewell, Jonathan B. Bunce and others of Hartford, and Edwin D. Morgan of New York, George Ripley of Lowell, Massachusetts, and others from outside the State, who constituted the first board of directors after the charter was granted in 1866 and $500,000 capital subscribed. Enoch C. Roberts's name as president appears on the carefully preserved first policy, dated February 14, 1867. His health forbade his continuance in office. It was not a sinecure since the "doubting Thomases" in industry limited the field and seemed to forbid compensation for efforts. With the advent of Jeremiah M. Allen to the presidency in September of 1867, hesitation was overcome. For a country wholly without data or means of securing them authoritatively, the publication of a small monthly magazine, "The Locomotive," a name suggested by the design on the corporation seal, was effective and was one of the indications of the earnestness and the wisdom of these trail-blazers. As the corporation title indicates, the principle was prevention. This implied devising

scientific skill and likewise equipment to compel recognition and then, as today, to keep abreast of the fast-advancing times. The enterprise could attract only men of purpose and ingenuity, and today, with the company's position as the foremost of its class and with financial as well as scientific success, the same is true. What with men like J. M. Allen, Francis B. Allen, Joseph B. Pierce, Lyman B. Brainerd and Charles S. Blake attesting their devotion through the years, and what with a rigid economy at the outset, description of which causes a smile among many promoters of the present time, the "Hartford Steam Boiler" has been in accord with the best Connecticut traditions.

Through the Years

The history of any company that has been true to Connecticut traditions seems bound to continue while man exists and, moreover, to assume new phases with the succeeding years as man's new needs appear. Hence details of the years through the period since the inception would require volumes and even then would be complete but for the moment. How individual companies have originated or applied new devices to meet changing demands itself would make a long chapter. Insurance today in most of its phases is so comparatively familiar to people of intelligence that it is practically enough to show that the Connecticut companies have kept in the van and there is no reasonable and improved form of insurance that is not written by them for a public that manifests its confidence.

We have seen the confusion and perils at the start, calling for courage along with integrity. It has been noted also that state regulation of insurance brought variety of requirement, the evil of which after making full allowance for the cause of the regulations, was one of the chief

hindrances in the business. After Massachusetts had set the standard for an insurance department, other states, feeling the need thereof, created departments which, in course of time, were either obtrusive through ignorance or deliberately greedy. Whereas companies of repute came to welcome their home commissioner when his men called unannounced to make periodical examinations at the companies' expense, certain of the states sent wholly incompetent men at frequent intervals, charging exorbitant fees and sometimes demoralizing an office. Again the ever recurring subjects of taxation, retaliatory laws, method of valuation and forms of policies became annoying in the extreme. Some advocated a plan to have the government establish federal control, but, in view of precedents, that could be thought of only as a last resort.

It came about that the insurance commissioners of the various states formed the National Convention of Insurance Commissioners. This body has greatly reduced the complications by studying all propositions, by securing more uniformity of action and by promoting wise legislation. The convention has come to comprise men of experience and sound judgment, somewhat unique in their position of influence.

The first real department of insurance in Connecticut, as has been said, was established in 1871 (passing over the period from 1866 when Benjamin Noyes was supposed to be supervisor) and, as said, Dr. George S. Miller brought Connecticut well into line. The Connecticut companies, both fire and life, were passing through an anxious period, and they gladly acknowledge their debt of gratitude to the first commissioner. His successors were: John W. Stedman, John W. Brooks, Ephriam Williams, Orasmus R. Fyler, John S. Seymour, Burton

Mansfield, Frederick A. Betts, T. H. Macdonald and Howard P. Dunham.

In Hartford itself, the Institute of Insurance with its lectures and lesson courses, established and carried on wholly and independently by those connected with the home offices, does much to promote efficiency and encourage development of ideas. Associations of underwriters, life and fire, by themselves and in conjunction with their national associations, are watchful of the interests of the field men and jealously guard the standard set for them.

Altogether, with much still to be desired in the matter of more uniform legislation and of taxation, insurance, considering its youth and its already gigantic proportions, is faring well; it will fare better as appreciation of its worth continues to spread. Its present position has not been gained without watchfulness and grit.

The workings of the speculative mania immediately following the Civil War were illustrated in the effort to get control of the Connecticut Mutual by would-be borrowers, fallen victims to the paper-money inflation. They secured a special legislative act so quietly that the company officials knew nothing about it till the eleventh hour. By that act, changing the method of electing directors, and by securing sufficient proxies, the schemers thought to get at the well guarded treasury. They failed.

Colonel Jacob L. Greene, who came to the presidency on the death of Major Goodwin in 1878, was like him, a stalwart. He contributed much to the effective literature against currency depreciation and against what he considered mistaken ideas in conducting insurance. John M. Taylor, who succeeded him in 1905, held the company true to its original course while broadening out

as the times required, and under Henry S. Robinson, president since 1918, if finds the reward of its honorable record. Its assets of December 31, 1923, are $110,333,136; liabilities, $104,968,973; surplus, $5,364,163. Its premium income in 1923 was $15,034,076; it has paid to policyholders or their beneficiaries since organization, $15,034,076. After renting modest quarters, the company, in 1870, erected what is still today (with enlargements) one of the handsomest and most commodious office buildings in Connecticut, at the corner of Main and Pearl Streets, where have been housed temporarily from time to time the offices of other companies now established in their own homes. At an early date, a new home will be built on land acquired on Garden, Myrtle and Collins Streets.

From the outset Hartford companies have been conservative, which is one reason why, as a whole, they withstood the speculation storms and the depressions of the two decades following the Civil War. The one notable exception was the Charter Oak. In 1867 and 1868 the records show a somewhat peculiar lapse. The charter limited dividends to stockholders to 8 per cent. In these two years it is recorded that it was voted to call for 25 per cent payments on stock notes, both for purpose to meet the requirement in some states for a cash capital of $150,000 (in 1868, $200,000) and to take advantage of the loan market so that the "8 per cent semi-annually" could be paid regularly; that the wherewithal for these payments was furnished by the company itself did not appear on the books. As said previously, the zeal of the company's field force was daily extending the popularity of the company to the extent of giving it rank among the foremost in the country, under the presidency of James

C. Walkeley. Commissioner Stedman, in 1875, called attention to certain facts, including the feathering of nests by distribution of profits in a way not contemplated by the Legislature. The company was the only one of the Hartford group that emulated a New York example and tried the experiment of cutting premium rates 20 per cent. Its air of prosperity was strengthened by its erecting a splendid granite office building, in 1871, at the corner of Main and Atheneum Streets.

President Walkeley was president of the new and venturesome enterprise for a railroad along the navigable Connecticut from Saybrook northward. The law did not allow the insurance company to invest in the bonds of the railroad, but the company could take the personal note of the president and later found itself in possession of worthless second-mortgage bonds. One incident followed another till an expert was called from New York, Henry J. Furber of the Universal Life, who had a reputation for relieving embarrassments. Mr. Walkeley gave place to Edwin R. Wiggin as president, after Mr. Furber had furnished needed cash, Mr. Walkeley becoming advisory counsel. Gross overvaluation of the premium-notes account was soon discovered. Investment income decreasing, Furber made masterly readjustments, even though it was in 1876-7, the period of greatest depression after the panic of 1873. Simultaneously policies were being sharply scaled, which was decidedly foreign to the principles of Connecticut people, some of whom went to the Legislature and secured the appointment of Supreme Court Justice Origen S. Seymour, H. M. Cleveland and David P. Nichols as a committee of investigation for all companies. A deficit of $2,063,412 was found in the case of the Charter Oak. The commissioner's petition for a re-

ceiver in July, 1877, was withdrawn when a complete change in the company management was arranged and former Governor Marshall Jewell became president. A sub-committee composed of Colonel Jacob L. Greene, Thomas O. Enders, Gustavus F. Davis and John M. Holcombe, insurance men and financiers, concluded after thorough examination that, with policyholders patient and confident, solvency could be reëstablished.

But policyholders were uneasy and their number was decreasing, especially after it was found necessary to scale capital and liability to policyholders 40 per cent. In 1878, those who had come to the rescue suggested a receivership and steps were then taken successfully to enable the policyholders to reorganize on a mutual basis. Wiggin, Furber, Walkeley and White (vice president), were tried for conspiracy, but were acquitted; one important witness had disappeared. Prospects were much brighter after George M. Bartholomew had consented to accept the presidency under the reorganization, since everyone had confidence in his ability. Unhappily he was interested in two manufacturing concerns whose treasurer absconded with most of the funds. Mr. Bartholomew had endorsed considerable of the paper of the concerns, following what hitherto had been a safe custom of his, and withal he had carried a larger amount of the insurance company's funds "as matter of protection against annoying attachments," which now he could not repay; he could only turn in collateral securities. Isaac Brooks of Torrington and Actuary Stedman as receivers wound up the company's affairs, obtaining 18¼ per cent for the policyholders.

Beginning at about this time, the Continental was falling under suspicion. As previously related there was

conflict in the management almost from the beginning and in 1873 the "outsiders" won, putting in John C. Tracy, president of a bank of that era, as one of the new directors, and making James S. Parsons president. Capital was made to appear fully paid in by Tracy's merely depositing on the proper date $180,000 of stock notes in his bank, crediting the amount to the company and then withdrawing them. His method of helping his friends came to work misfortune for the bank and downfall for himself. The commission that was appointed in 1877 to examine all companies found various items in the Continental's accounts it did not like, including mythical assets and possible legerdemain. Nor could the compulsion of Commissioner Stedman, after the committee had reported, for restoration of funds used by the company to buy its own stock deter men in the company from manipulating securities in a way which was revealed when a local firm of brokers went to the wall. In 1887 Commissioner O. R. Fyler's firm action resulted in the appointment of Lorrin A. Cooke and John R. Buck as receivers to close up the business, which they did in due course of time.

Legislation and Progress

Appreciation of the history of insurance in any given state cannot be gained without sidelights from the history in other states. Insurance is not "commerce," as the Supreme Court has decided, so it cannot be generalized under federal control without special legislation, nor would such be in keeping with its nature. More than was realized in those stormy days, it has to be advanced to the dignity of a profession, and the safeguards thrown around it must be those which the individual states devise, always assuming that both the states and the company

managers are imbued with proper conception of their duties in accord with the high principles of insurance itself. In the period of the Seventies, a period of inflation and panic which probably never can recur, certain men in insurance as in other lines and callings found a way to make some old laws appear ridiculous and to reveal the harm that other laws could work. Connecticut could hardly be free from such men, but it would not have kept onward to the position it holds today had it not been that the proportion of them was small. Laws did not help much; nor were the laws enacted in various states after mischief was done, to advance as they might the real cause for which they were framed. Honesty cannot be legislated, efficiency cannot be wound around with red tape, masters do not improve by multiplication, and economy is not the child of hysteria. A wrong-minded man evades, the skilful hand must have freedom of action, the servant must respect, and the thrifty ill endure the wastefulness of manifolded and variegated reports and costly volumes for a publicity which does not and cannot publish. Rid of many restrictions, in states when the voucher of one is accepted in all, where justice and not spite prevail, insurance would make more rapid strides, with much saving to policyholders—as is coming to be realized.

Uniformity in reports, brought about by the Convention of Insurance Commissioners, leading toward reduction of the present wastefulness in publications; cleaner comprehension that funds belong to all policyholders and must seek most profitable and most prudent investment not subject to the whims of individual states; spirit of brotherhood instead of retaliation and better training of those who "carry the gospel," these are developments out

of the ruck for which the period of the comparatively infantile Seventies was responsible.

The investigation of all companies doing business in New York State thirty years later, in 1906, by the so-called Armstrong committee of the New York Legislature, when the probe was directed largely by the Honorable Charles E. Hughes, was primarily in response to a demand, company-wise as well as public, to crystallize these and like ideas, to sum up and impress the good and to eliminate the injurious. There undeniably were companies that had been too ambitious, aspiring to be large, and the vast accumulations of money invited query. The investigation was not unwelcome to the sturdy institutions like Connecticut's. While they received the stamp of approval and the resultant laws were not irksome for them —indeed, were in the nature of general improvement for companies as a whole—the most hopeful feature was found in the evidence of cleaner comprehension on the part of the makers of laws. The decrees for distant separation of non-participating (or mutual) and participating (or stock) insurance within the same company, for limitation of expense in procuring new business, for high standards in employing agents and for avoidance of European entanglements were calculated for wholesome regulation of competition and to keep to the fore the fundamental principle of protection for the millions of people.

Not all was achieved that could be wished, either in establishing or eliminating, but progress in history was manifest, and hope inspired for better harvest from experience through the future. New York laws are for but one state but they establish a standard by reason of the fact that most companies seek to do business there. Each individual state is bound to have laws of its own, but in

the main principles there must be good degree of harmony with New York's, leastwise to the extent of not having their home companies debarred from New York. Certain other states have laws as to compulsory investment of funds within their own borders or, for fire insurance, in relation to rates, to which companies may so far demur as to withdraw their business, all with view to the best interests of their national body of policyholders, directly or through the effect upon their funds; but altogether the influence of the New York attitude is guarantee through sufficiently wide territory for companies national in their scope. One meaning of this, which makes it eminently noteworthy in an historical review, is that the states are coming, of their own volition and through their appreciation of the principles, to get in line. And what marks it for a Connecticut historical sketch is that the line is very close to that which Connecticut has observed through the years.

No restraint has been put upon companies to meet actual needs—to stunt their ingenuity. Following the chronological order observed in the earlier part of this review, the Aetna Life may be taken as an illustration. The business of that company progressed slowly until the year 1915, when insurance amounting to $72,494,449 was issued. From that time forth the business increased much more rapidly until 1923, when the business written and paid for amounted to $511,610,544. This included a considerable amount of so-called group insurance, which the Aetna commenced to issue early in the year 1913 under the advice of its president, the Hon. Morgan G. Bulkeley. As all of the world now knows, this means the protection of such groups as employees of corporations, workmen for contractors, and people in offices, welcomed by those

who bear the chief burden of the premiums because it diminishes "turn-over" among employees and reëstablishes much of that invaluable manifestation of interest of the employer in the employed which modern crowding conditions had forced downward. In character it was co-ordinated with that other "new thing under the sun," compensation insurance, springing forward to meet the requirements of employers when enlightened legislation was demanding that they share the cost of industry or wear and tear upon humanity.

In 1891, the Aetna Life took up accident insurance with success indicated by its premium figure for 1923—$3,945,596. Shortly, health and liability lines were added to accident, and what with distinct workmen's compensation business, the 1923 premiums were $24,624,690. At the same time the premium receipts, inclusive of group insurance were $38,687,205. As a natural accompaniment of the growing demand for personal liability insurance in its many forms there also developed a demand for insurance to cover property damage. In order to place its agents in a position to solicit such business, and since the charter of the Aetna Life did not provide for the writing of insurance to cover material damage losses, there was incorporated the Aetna Accident and Liability Company under the same management as the Aetna Life. This affiliated company began business in 1907 with $500,000 capital and $250,000 of paid-in surplus. Four years later the paid-in capital was increased to $1,000,000 to keep pace with this new company's underwriting program. In 1917 this corporate name was changed to the present name, the Aetna Casualty and Surety Company, thus indicating its broadened scope of underwriting. Since 1917 scarcely a year has passed without bringing to light the

need for forms of casualty coverage either new or new in this country. Thus, in 1919, for example, the company undertook the writing of engine-breakage insurance, and later engine coverage was further amplified by the issuing of electrical machinery insurance. Check alteration and forgery insurance was introduced in 1920.

Five years after the Aetna Accident and Liability Company began business, automobiles had come into general use. Under their charters neither the Aetna Life nor the Aetna Accident & Liability could underwrite the fire insurance which was such a necessary part of complete automobile coverage. The obstacle was overcome by adding a third member—the Automobile Insurance Company—to the Aetna Group. This corporation began business April 19, 1913, with $200,000 capital stock.

The combined capital of the Aetna companies today is $17,000,000. Their assets December 31, 1923, were $285,518,829; liabilities, $235,549,319; surplus for policyholders, $50,029,508; and policyholders or beneficiaries have been paid since organization, $765,586,330.

The Phoenix Mutual, after the severe stress of the early Seventies, added much of value to the history of insurance. Aaron C. Goodman, a large stockholder, had returned to Hartford after a successful business career and, as director, found himself not in accord with some of the office methods of the old regime. It required the acquisition of but little more stock to make him the chief stockholder and bring about a reorganization with Mr. Goodman as president, Jonathan B. Bunce as vice president and in charge of finances, and John M. Holcombe, who had been the first state insurance department actuary, as secretary. This was in the summer of 1875. The new management, with face set toward the future and visions of

insurance more nearly on the approved basis of today, worked zealously to correct conditions due in this as in many companies to erroneous conceptions. The establishing of strong surplus was, to their way of thinking, a *sine quo non.* It grew from $4,700 in 1875 to $1,400,000 in 1888.

About that time, Mr. Goodman desiring to retire, a former superintendent of the New York insurance department introduced a Philadelphia insurance capitalist who offered $500 a share for Mr. Goodman's stock. As a Pennsylvania State Senator, a Presbyterian elder and a prohibitionist he had strong testimonials. Fortunately it transpired that Hartford men had been deeply impressed by the lessons in finance throughout the country the previous decade and more, that they had pride in this structure they were erecting on the company's solid foundations and that they were dubious about control by a newcomer who would buy simply a majority interest. Assets and cash in bank might be tempting to a plotter, however strong his credentials. Holders of stock and holders of policies began to think on these things.

But how could control be passed from stockholders to policyholders, so that danger like this could forever be avoided? While the insurance world watched intently, the Legislature approved charter amendments and authorized a change of ownership, through the office of the state commisioner, Orasmus R. Fyler. On the purchase of all the stock, which he meanwhile would hold in trust, continuing the operations of the company, he would surrender the certificates to be canceled. The controlling stock was then bought at $250 by a syndicate of directors and others appointed by the company's counsel, Charles E. Gross, and was given to John C. Parsons in trust till the

rest was bought, Mr. Goodman retiring. The policyholders voted such purchase on December 3, 1889, according to legislative stipulation. At the same time they made Mr. Bunce president and Mr. Holcombe vice president. The following year the Philadelphia promoter and three confederates wrecked an insurance company and a bank in Philadelphia and were punished.

Taking advantage of scientific methods, meeting the needs for insurance forms and prudently nursing reserves, the Phoenix Mutual, eventually devoting itself wholly to participating insurance, came to realize all that its new management had expected. Mr. Holcombe succeeded Mr. Bunce as president in 1904 when Mr. Bunce accepted the presidency of the Society for Savings, continuing with the company as chairman of the board of directors until his death. In 1923, Mr. Holcombe resigned and was made chairman of the board, to be succeeded as president by Archibald A. Welch who was actuary for several years and then vice president. Vice President Silas H. Cornwell has been with the company over fifty-six years. The company made special study of the investment problem and was one of the first to loan on western farms. Today it has the office of financial vice president, Arthur M. Collens being the incumbent. It has the regulation policy forms and special agreements to meet special requirements; in the matter of annuities, now beginning to come into their own in America, it has been a leader.

In 1920, having outgrown its building on Pearl Street, it moved into its present home on Elm Street, facing Bushnell Park, one of the most approved office buildings in New England. Growth had been promoted by an agency programme in which the company was a pioneer,

cutting out all part-time men and furnishing training for those who, made the business their life calling. Its assets December 31, 1923, were $75,360,356; liabilities, $71,-617,923; surplus to policyholders, $3,742,433; and it has paid to policyholders or beneficiaries since 1851, the sum of $59,864,248.

The progress of the Connecticut General has been consistent from the time of the depression in the Seventies. From 1872 to 1887 it tried the popular experiment of a modified form of tontine but did not find it in keeping with the principles it would adhere to; while greatest care was exercised, the public did not grasp the plan and rather than have misunderstandings, everything was dropped except plain insurance—latterly with its accessories of accident and liability, automobile and group insurance. Robert W. Huntington, Jr., who came to the office as a clerk in 1893, succeeded Mr. Russell as president in 1901. Territory as well as forms has been greatly broadened. It writes much group insurance and has a special accident and health department.

The company is retaining for a while longer its office buildings on Pearl Street till the completion of its fine building in the new insurance row on Elm Street facing Bushnell Park. Its stock has been increased to $1,000,000 with assets at the close of 1923 of $52,962,-136; liabilities, $48,649,167; surplus to policyholders, $4,312,969 and payments to policyholders or beneficiaries since it began, $22,065,531.

Assessmentism with a safety-fund guarantee was the Hartford answer in 1880 to the demand for something like the "natural premium" and yet protection against disaster in later years. The idea was conceived by Henry P. Duclos and was put in operation by the reorganized

Hartford Life and Annuity. A fund growing to $1,000,000 was placed in the keeping of the Hartford Security Company; income from it should be added to the regular contributions from new members ($10 a thousand) to be distributed among members to reduce their assessments for actual mortality as it occurred—a flat rate of $3 a thousand being charged for expenses. If ever the amount of insurance in force fell below $1,000,000, the fund should be employed to pay all outstanding policies in full. A similar system was established for women. Under the presidency of Rienzi B. Parker, from 1893, the plan was meeting with favor as having removed the great objection to assessmentism, but dissatisfaction with assessmentism in general caused the adoption of laws in various states which seriously curtailed the activities of the Hartford company. It had built a fine home office on Asylum Street at Ann, in 1897 but found itself in the position of being bound to the fund while seeing business decrease; decreasing business caused complaints because of consequent heavier assessments, and members dropped out after net cost for a period of years was as great as that for renewable term insurance in regular companies—those remaining being such as had short "expectancy of life" or who hoped to recoup on the division of the safety funds when insurance in force dropped below the fund limits. The situation was unparalleled and troublesome.

Devoting its facilities to the writing of plain insurance, it kept up the safety-fund branch as required by charter, but under the new name of the Hartford Life Insurance Company. In 1899 the majority interest in the company was acquired by George W. Keeney of Somerville and others and the next year the capital of $250,000 was doubled by a cash dividend. In 1910 the company was

sold to John G. Hoyt, a Cincinnati insurance man. In 1913, Mr. Hoyt continuing as president but removing to St. Louis, the company was merged with the Missouri State Life of Missouri. The safety-fund branch remains at the Hartford office to make collections and eventually to discharge obligations under the safety-fund requirements.

What with its accident and life insurance—either of them a success in itself—the Travelers went forward rapidly, even during the panic period. A stock dividend of $100,000 was declared in 1875, and the capital was made $1,000,000 in 1892. An historic mansion on Grove Street which it had bought was made over and enlarged several times and was several times outgrown. In 1906 it organized the Travelers Indemnity Company with a capital of $500,000, for accident, automobile and steam boiler insurance. This was during the presidency of Sylvester C. Dunham who had been promoted on the death of President Batterson in 1901. Group and annuity insurance with all the rest began to play an important part.

In 1908 the company's capital was increased from $1,000,000 to $2,000,000 and a little over a year later, with a stock dividend of $500,000, increased to $2,500,000. In 1910 the Travelers Indemnity Company, to meet increasing business, lifted its capital to $1,000,000, and the way was open to surety business. In December, 1912, it was voted to raise the Travelers Insurance Company capital to $5,000,000 by the largest dividend ever paid in Hartford. Today the capital, advancing in like manner, is $10,000,000, with a casualty department, and the capital of the indemnity company is $1,500,000.

Meantime, for accommodation of an office force of 484 in place of the original four, valuable property on Main

Street and Grove had been acquired and a ten-story building constructed. This was occupied in May, 1907, and was little more than half what was contemplated. In April, 1912, the second part was begun and on the company's fiftieth anniversary this was completed. Like the first part, it is of Westerly granite, and light brick for the court walls. It remained to add the tower, carrying the height up to 527 feet with twenty-seven stories, higher than any building in New England. This was completed in 1919. On the death of President Dunham on October 26, 1915, Louis F. Butler, the vice president, was chosen his successor.

The assets of the insurance company at the end of 1923 were $286,092,880 and of the indemnity company, $10,867,617; their liabilities, $260,766,690 and $7,933,998, respectively; their surplus to policyholders, $25,326,190, and $2,933,618, and they had paid to policyholders or their beneficiaries, $95,609,135 and $8,620,243. As President Batterson's expectations had been exceeded the first year, so the expectations of subsequent managements have been exceeded each year.

It is significant that the other company, the Hartford Steam Boiler Inspection and Insurance Company, which in the Sixties started out in comparatively untried fields, as we have seen, also fared through the panic period without let or hindrance and has known diminution of neither business nor income since. In 1874 the portion of the $500,000 capital represented by stock notes was lopped off; in 1887 the full $500,000 was reëstablished in cash. The insurance department in the earlier days, because of the small number of losses, asked for no statement of reinsurance-reserve in the item of liabilities. The aim of the company always has been to prevent losses by careful

inspection. It has come about naturally that the company today has to have a force of 300 trained men and fifteen departments for directing them. The museum at the home office shows some of the more remarkable, dangerous defects that are discovered, even when it is supposed the engine or boiler is in prime condition.

As President Allen foresaw when he inaugurated the plan, there was to be a great demand for drawings and specifications for replacement apparatus and eventually for wholly new plants. An engineering department with a powerful name in the world of scientific construction was built up. Coincidentally a chemical department was found necessary and that likewise has done much not only for the company but for the general cause of science.

The company at its beginning in 1867 was the only boiler-insuring company in this country. Gradually its success influenced the entrance of others into the same field. A number of companies who did thus try to imitate "The Hartford," became discouraged and in fifty years, at least twelve companies withdrew from the boiler-underwriting field and reinsured with "The Hartford." Today, while there are many companies competing with it in the boiler and flywheel underwriting field, "The Hartford" maintains the position which it has constantly occupied as the writer of more insurance in those combined lines than all its competitors together. And "The Hartford" is today the only stock company in America transacting an exclusive steam boiler and flywheel business. In the country-wide "safety" movement, the company was the first corporate leader.

The first offices were small rented rooms; today the company accommodates its large and interesting departments in its large building at the corner of Prospect and

Grove Streets. Its capital is $2,500,000; its assets as of December 31, 1923, $12,166,028; liabilities, $6,305,865; surplus to policyholders, $5,860,162; and it has paid back since its start, $4,040,564. What it has saved by prevention is incalculable.

The First Reinsurance Company of Hartford, as its name indicates and has been said earlier in this sketch, attained a position, created by the needs of modern life insurance in particular, where increasing power for usefulness under its broad charter is being demonstrated. It was a subsidiary of the Munich Reinsurance Company until the outbreak of the World War; in April, 1918, it came under the jurisdiction of the alien-property custodian, who named the directors, and they chose Herbert H. Stryker president in place of Carl Schreiner who had been dropped from the board. When it came to the sale of alien property held by the federal custodian, in 1919, no acceptable bids for the Munich's share of the stock were received. The following spring a committee of the directors made a satisfactory offer and in June, 1920, after elimination of foreign holding, reorganization was perfected by practically the old American interests, including insurance companies in Hartford, and with Mr. Stryker as president. In March, 1925, the Rossia reinsurance group, appreciating the worth of this company, completed arrangements for its acquisition, the life insurance portion to go to the Sun Life of Canada.

The company's capital is $500,000; its assets at the close of 1923, $4,342,149; liabilities, $3,121,508; surplus to policyholders, $1,220,850; paid to policyholders or beneficiaries since organization, $9,099,109.86.

The work of the mutual fire insurance companies of

Connecticut is shown by these figures for 1923: Assets, $3,157,248; liabilities, $1,062,171; surplus to policyholders, $3,803,503; premiums received last year, $580,672. In life insurance there are fraternal benefit organizations in the State which have an income of about $5,000,000 and disburse about $4,000,000 annually.

The total capital of the fire and life insurance companies having homes in Connecticut is $59,518,000, including amounts deposited by the few foreign companies located here. These companies have paid policyholders or their beneficiaries since their organization (or since admission to the United States) $2,561,289,422. Including the local mutual companies the total of assets is $1,091,902,814; of liabilities, $901,621,155; and of surplus to policyholders, $193,692,083. They had a premium income in 1923 of $428,824,666.

Connecticut's population by the census of 1820 was 1,380,631 or about one seventy-seventh of the population of the country. The assets are equal to nearly one-fourth of all the money in circulation in the country in 1923.

Emphasis has been laid upon the amount of protection these figures indicate—the feature represented by the item of $2,561,289,422, or nearly enough to pay twice the national debt at the time America entered the war. Such protection withdrawn would mean serious menace to commerce and industry and an incalculable amount of misery and deprivation to thousands of families. Yet the body of citizens who take pride in these statistics and the evolution of them as has here been outlined fail to grasp their full significance as history unless they measure also these two phases: First, the ability and integrity displayed in investing funds and maintaining unquestionably strong reserves to meet demand for an indefinite number

of years, and second, the value to the nation in providing these sinews for commerce, industry and agriculture—for all the proper and peaceful pursuits of mankind.

To furnish protection for enterprise, property and life was the one thought of the pioneers; to build a cash bulwark that should be as enduring as anything human can be was the further aim of those who followed them only a half-century ago. Nor could any mind even then have conceived the double benefit from such a bulwark—not an inert mass but something which in itself should bring blessing to insured and uninsured alike. In the various steps that have been traced it has stood out preëminent that achievement would have been impossible without integrity in combination with genius and devotion.

To describe what the savings of policyholders have done year by year when creating this bulwark would require volumes upon the progress of mankind's occupations; and to tell the story of what these savings have brought unto themselves to strengthen the bulwark and to lessen the requisite amount of savings themselves, so that more and more people of small income could share in the protection, would be to review the details of the country's material development. When the first steamships and railroads were helped with funds till public patronage enabled them amply to repay, it was gratifying, though the public itself was all unconscious of it; when the mid-west farmers, standing almost helpless on their fertile soil, got the money with which to turn that soil, national confines suddenly widened out across the prairies.

This called for more bonds for the government, the states and the communities. Insurance savings were ready. From the beginning the companies advanced funds freely, though with discrimination, and today their led-

gers show millions. What this could amount to came into little public appreciation till the Liberty Loans were issued and the wide character of the insurance bulwark was exemplified. More tillage, more industry, more rails, more ships and more people made demand for more buildings, more roads, more essentials of civilization. Connecticut insurance money again was answering the call, wise financiers keeping in mind the sacredness of their funds. Their annual published statements, in bulky volume, are not on the shelves of the "best sellers," but page after page of detailed investments are history in its true sense.

Laws on investment, as we have seen, there had to be, and Connecticut was liberal while discreet in framing hers —a few brief paragraphs. No loan or investments can be made by a life company without unanimous approval of its finance committee or of a majority of directors (who must affix their names). No officer or director shall receive any valuable thing for negotiating or recommending or selling an investment. Mortgages must be secured by unencumbered real estate worth at least double the amount thereof, or by a pledge in collateral having 10 per cent excess value, or by government or state bonds of equal value, and loans on policies must not exceed the net reserves. Investment in mining companies, manufacturing companies or in any other private corporations not up to the high standard described in the law is prohibited.

The close affiliation of the insurance companies in the old days of stress has been noted and the same spirit is ever manifest for the general advancement of the calling. Withal it is in constant evidence that the relations between the great financial institutions in the State are most assuring. The companies carry stock of the leading banks to the extent of $4,000,000. For the aid of property-

owners within the State they have outstanding today approximately $8,450,000. To Connecticut State and its counties and municipalities they have advanced nearly $14,000,000, according to present accounts, say nothing of what had been advanced in the preceding years. The five leading life companies, by their last reports, are at the moment assisting carefully selected farmers throughout the country with $240,000,000. The loans to the federal government by all the companies taken together mount up to $231,000,000 in round numbers; to railroads, $75,000,000 and to states, provinces, counties and municipalities, $300,000,000.

The place of insurance in the world is best determined by the various considerations of how prudence on the one hand and state and federal progress on the other are promoted; of the collecting, guarding, investing and repaying the people's contributions, and of the ability and wisdom of the men comprising the management of each company from the beginning. It remains that the place of Connecticut in insurance was established and is maintained by the courage of well-founded conviction, by conconservatism and by fidelity to the fundamentals.

CONNECTICUT AGRICULTURE

By Edward H. Jenkins

Chemist—Born Falmouth, Massachusetts, May 31, 1850; son of John and Chloe (Thompson) J.; A. B., Yale 1872, special studies in chemistry, 1872–1875; University of Leipzig, 1875–1876; Ph. D., Yale 1879; married Elizabeth Eliot Foote of Guilford, Connecticut, June 18th, 1885; chemist Connecticut Agricultural Experiment Station, 1877–1900; vice director, 1882–1900, director, 1900–1923; treasurer, 1901–1923; Chairman State Sewage Commission, 1897–1903; Fellow A. A. A. S.; president Graduates Club, New Haven, 1900–1905; president Association Agricultural Colleges and Stations, 1913; address 108 East Rock Road, New Haven, Connecticut.

PRELIMINARY

THIS paper is rather a sketch of the course of Connecticut agriculture than a complete history of it. A history should cover the economic, political and social relations which went with and greatly affected its practice and its prosperity. But such a history would of itself be a volume and not, like this, a single paper among many others relating to the State.

However, great the temptation to discuss the broader aspects mentioned, it has been necessary therefore to confine the work simply to the story of the development of the art of farming, with only the barest reference to the economic and political conditions of its environment.

To set forth the effect on agriculture of the expansion of manufacturing, the embargo and non-intercourse acts, the opening of the west, the development of transportation and the six wars cannot be discussed here.

Yet they all deeply affected the course of agriculture. They were like the buffetings of heavy waves, with agriculture now on the peak and then in the trough of the sea, constantly conning the helm and trimming its sails to avoid shipwreck. Of course this experience is not peculiar to farming; all kinds of business are affected in the same way. But these great disturbances bore with a special severity on the farmer because of his inexperience in transacting business. For more than a century and a half farming was not a commercial business, but a domestic affair of each house-holder, chiefly confined to providing food and clothing for his own family.

Business acumen and the methods of trading have to be learned by long experience and they are a comparatively recent acquisition of the farmer.

It is not so long since the three courses open to young men were "the professions, business and farming." At present farming should really be a profession and a business in order to be a fairly successful "calling."

Aboriginal Agriculture

No writing or legend gives the history of agriculture in New England before the coming of tthe white man. But on a somewhat extensive scale a simple kind of agriculture was certainly practiced by the Indian dwellers here long before the seventeenth century.

Almost its only relics are the few crops which they raised, of which maize was their staple and their priceless bequest to their successors, a crop which they cultivated extensively and stored for winter use.

This stored corn was all that stood between the first settlers and great scarcity of food if not of actual starvation and in the earlier days of the settlement was occasionally bought of the Indians to relieve a time of scarcity.

It has been one our staple crops from Colonial days to the present and is now grown in larger quantity in the United States than any other.

Maize or Indian corn had its origin in America but has been changed by "domestication" so that it bears no close resemblance to any native species now known and has been developed out of all fitness to survive in a wild state. This was probably a work of centuries by people who have left no other record of this work in plant breeding than the domesticated plants which they have handed down to us.

It is a development for which we are indebted probably to some ancient civilization in Central or South America,

a development vastly more valuable than any of those of a modern "plant wizard."

Of particular interest is the Maya civilization developed in Yucatan, of which the earliest established date is 113 B. C., and the time of greatest development from 455-597 A. D. The Mayas reached a high state of culture as is shown by their monuments and inscriptions which have lately been studied and partly deciphered.

They planted corn, beans and pumpkins, taking advantage of the wet and dry seasons to harvest two crops annually. Among their records are pictures of the maize-god, planting corn, represented frequently as a youth with a leafy headdress, possibly meant to represent an opening ear of corn. This deity appears to be at the mercy of the evil deities when not protected by the good (59, p. 94). Other pictures show attacks by worms and birds, suggesting that the pests are as old as the plant. The zodiac sign, Virgo, the Virgin, is represented in Peruvian, Mexican and Maya sculpture as the Maize Mother.

Roger Williams (10) writes of the Indian tradition as to the source from which corn and beans came, "These birds," crows, "although they doe the corne some hurt, yet scarce one native amongst an hundred wil kil them, because they have a tradition, that the Crow brought them at first an Indian Graine of Corne in one Eare and an Indian or French Beane in another, from the great god Cantantowit's field in the Southwest from whence they hold came all their Corne and Beans." The last clause of this tradition is probably correct.

Our flint, dent and sweet (45) types, the very early and the tall, later maturing sorts of corn were probably all grown by the aborigines before the settlement by white men. In pre-Columbian days one or more varieties were

grown all the way from the St. Lawrence on the north to the Rio de la Plata on the south.

Pumpkins, squashes, beans and peas were also grown by the Indians, all but the last probably indigenous to this country.

"Peas" were grown by the Indians, according to the annalists, but the Canada pea and the field pea are old world plants. Possibly a Lathyrus, vetchling, or some small rounded bean is what is referred to.

Before the coming of the white man there was a plenty of land in Connecticut well enough cleared for growing what crops were needed. Besides using the tidal marshes and the alluvial lowlands, the aborigines had also long practiced burning portions of the woodland to make easier the taking of wild game, deer and turkeys. This cleared the forest of underbrush and young trees. Larger trees, (33) were girdled by the Indians to make open spaces where their crops could be planted, leaving them ready for further improvement (24, Vol. I).

The Narragansetts' land in Rhode Island was cleared of wood for eight or ten miles from the seashore and planted to corn (76. Vol. I).

There is abundant evidence of large clearings elsewhere.

Says Roger Williams, (10) "When a field is to be broken up, they have a very loving, sociable, speedy way to despatch it; all the neighbors, men and women, forty, fifty, a hundred, etc. joyne, and come in to help freely." The field was not wholly tilled but corn was planted in hills 12 to 20 inches in diameter and the soil of these hills was all that was cultivated. The hills were used over and over in successive years and they have persisted in some places until recent times. (10). Near the sea, at

least, fish, (menhaden) were exclusively used as a fertilizer.

The implements of the Indians were very crude. Iron was unknown. Stone hoes and perhaps spades have been found. Bones, shells and wood were also used; yet it is said of their cultivation (78), "Wherein they exceede our English husbandmen, keeping it so cleare with their Clamme-shell hoes as if it were a garden rather than a Cornefield, not suffering a choaking Weede to advance his audacious Head above their infant Corne, or an undermining Worme to spoile his Spurnes."

They also used a hoe made of the shoulder blade of a deer or a tortoise-shell, sharpened upon a stone and fastened to a stick.

"Their corne being ripe, they gather it, and, drying it hard in the sunne conveigh it to their barnes, which be great holes digged in the ground in form of a brasse pot, seeled with rinds of trees, wherein they put their corne, covering it from the inquisitive search of their gormandizing husbands, who would eate up both their allowed portion, and reserved Seede if they knew where to find it." (78).

Connected with aboriginal agriculture should be mentioned two important plants which were not cultivated but were used extensively. The first is a food plant to which writers refer as "rice," "Indian rice," or "Canada rice," *Zizania aquatica,* a grass which grows commonly along the banks of streams and marshes and in shallow water. It was easily gathered in the early fall and is palatable and nutritious. It is still gathered and used in the stuffing of game birds and is esteemed a luxury.

The other plant yielding a textile fiber, was the Indian hemp, *Apocynum cannabinum,* which grew commonly in

this State. From the fiber of this plant the women twisted twine or rope and made, among other things, fish nets, sometimes twenty or thirty feet long (69. Vol. I).

Oldham, in a trading trip to Connecticut in 1633, found that the Indian hemp grew spontaneously in the meadows in great abundance. "He purchased a quantity of it," it appeared to him "much to exceed the hemp grown in England." Later writers, however, pronounced it inferior to the other.

Roger Williams says, "the Indians all take tobacco, and it is commonly the only plant which the men labor in, the women managing all the rest." This was probably *Nicotiana rustica,* a smaller plant and inferior to our cultivated species. It is stated that it was grown in Canada as early as 1535. Flags and rushes and certain vegetable dyes were used for making baskets. Carrier asserts (9), that "a comparison, crop by crop, taking into consideration acreage and value of these products with all other crops now grown in the United States shows quite clearly that our agriculture is about one-third American." The agriculture of the Indians was chiefly if not wholly managed by the women. Stiles says, (61), that a common exhortation at marriage was in substance, "You, man, must take good Care to hunt deer and fish and provide Meat for your Squaw. You, Squaw, must take care to plant and hoe Corn and bring wood and cook Victuals for your Sannup."

The Indian men are generally regarded as lazy, shiftless and improvident in their family life, allowing or forcing their women, who were reckoned to be inferior beings, to do all the drudgery. No doubt there is much of truth in this. Laziness, incompetence and contempt of women did

not mark the aborigines as absolutely different from many of their successors in this State.

This judgment on Indian men must be tempered by the following facts:

The woman owned all the household property of the family, including the tools used in farming, cooking, dressing skins and making fabrics and in many tribes food, skins and individual dwellings or wigwams.

Indian descent was generally through the female line. Children belonged to the mother's, not the father's totem. In some cases a female sub-chief sold land to the settlers, but this, an international affair, was usually conducted by the male chief.[1]

The man had to be always ready to join in a foray against his neighbors of another tribe, or to repel a foray from them. He was at all times and of necessity a warrior. Hunting and fishing required skill and strength. Thus women were the property holders of the family groups. Men represented the army, legislature and courts and did such provisioning of the family as required capture and killing. All their work required at times protracted labor, exposure and hunger and when the search for food and the defense of the property and life allowed, they may have been, in the language of Kipling, "most 'scrutiating idle." When about his regular work the Indian was alert, crafty and superstitious with occasional streaks of loyalty and honor—and a reveller in all the arts of hideous cruelty.

[1]In the allotment of land in severalty to the Indians in modern times one grievance was found to be that it was allotted to the man and not to his wife, contrary to their idea of what was proper.

Agriculture in the Seventeenth Century

The aboriginal agriculture was the root on which the Colonial agriculture was grafted. No attempt will be made to recite the events of the colonization farther than to note those which have a very direct bearing on agricultural development.

It is important to consider the physical surroundings of the first traders and immigrants who began coming to Connecticut in 1631.

The country is described as a wilderness. Its topographical features were not very different from what obtains today. It was, of course, much more thickly wooded than now and abounded in heavy timber.[2]

There were of course no roads but only Indian trails and the first settlers from Massachusetts had perhaps to hew their way for a part of the journey.

The territory was not, however, wholly a forest, but abounded as we have seen in open, roughly cleared tracts, suitable for cultivation and capable of increased production with the use of iron implements, axes, hoes and spades which the colonists brought with them.

The whole area was occupied or claimed by various tribes of Indians who numbered, according to Trumbull's estimate, not less than twelve or fifteen thousand and possibly twenty thousand (69. Vol. I). But DeForest (23a), considers this much too high an estimate and holds that 1,200 warriors and 6,000 or 7,000 individuals is a liberal allowance for the aboriginal population.

They were more numerous in Connecticut, in propor-

[2] (31) "The pine tree challengeth the next place and that sort which is called the Board pine is the principal; it is a stately, large tree, very tall, and sometimes two or three fadoms about; of the body the English make large Canows of 20 foot long, and two feet and a half over, hollowing them out with an adds and shaping the outside out like a boat."

tion to area, than elsewhere in New England, for the land was rich in game, the waters rich in fish and the soil, in parts, very fertile.

These Indians chiefly belonged to the Algonquin family while over the border in New York was the Iroquois family, or the "Six Nations."

These families were divided into a considerable number of tribes.

Thus the west shores of Narraganset Bay were peopled by the Narragansetts, numerous and warlike, who held in partial subjection the weaker Nyantics near Point Judith. The fair dealing and tact of Roger Williams did much to restrain the hostility of the Narragansetts to the settlers. To the west of these and about the Thames River were the still more formidable Pequots who for fierceness and bravery were preëminent in southern New England. Westward, in the lower Connecticut valley, were the Monhegans, a small but valiant tribe held tributary to the Pequots and restive under it. There were also numerous lesser tribes within the present boundaries of this State, Nehantics, Quinnipiacs, Tunxis, Podunks and others. The thickly wooded mountain ranges between Connecticut and the Hudson had few inhabitants. But beyond, in New York, were the fierce Mohawks, dreaded by all the others, to whom the Mohegans paid yearly blackmail to avoid plunder and murder as far as possible (26).

Down to about the time of the first settlement of Connecticut the New England settlers had experienced no great trouble with the Indians.

They were at first disposed to be friendly but as the settlements began to be pushed further inland and some of their best clearings to be occupied by the invaders, even

though the land had been fairly bought of the tribal chiefs, hostility increased and soon resulted in actual war.

Of predatory wild beasts, bears, wolves, panthers, lynxes and foxes were very common and, as will be seen later, were very destructive to the livestock and crops of the settlers for more than a century.

Into this country adventurers came from Massachusetts in 1633 and halted at Windsor. This was a trading expedition and made no permanent settlement. In 1635 about sixty men, women and children with their cows, horses and swine came overland from Plymouth and Massachusetts Colonies to the region of Hartford, starting on October 15th. They were unable to build dwellings before winter, their goods which were sent by sea were lost and most of them made their way back to Boston.

A very few remained (10). But in 1636 Wethersfield, Windsor and Hartford were settled by colonists from Massachusetts.

The Newton (Cambridge) congregation, (38) through their minister, Rev. Thomas Hooker, urged from the authorities permission to migrate.

The reasons given were, the crowded state of their lands which prevented their friends in England from joining them,[3] the fertility of the Connecticut soil as reported by Oldham and the fact that settlement would shut out the Dutch who were trying to establish a claim to Connecticut. "The minds of this people were strongly inclined to plant themselves there."

Hooker wisely did not mention in his petition that there was considerable discontent also with the narrowness and

[3] Cotton Mather, (65. p. 17), in referring to the migration from Massachusetts, said: "Massachusetts soon became like a hive overstocked with bees, and many thought of swarming into other plantations."

strictness of the Winthrop-Cotton administration in Massachusetts.

Permission was rather grudgingly given and a migration followed, apparently in three companies. One, of one hundred persons, mainly from Dorchester, Mass., journeyed overland in fourteen days and settled in Windsor. The second company, mainly from Watertown, Mass., probably went from Boston by water to Wethersfield. The third made their way overland with 160 head of cattle "and fed of their milk on the way," and settled in Hartford. "Women and children took part in this pleasant summer journey which lasted about two weeks." Mrs. Hooker, being ill was carried in a horse litter (26). In the following year 800 people were living in these towns (or settlements), forming the Colony of Connecticut.

In 1638 the town of New Haven was founded under the leadership of Davenport and Eaton, which soon became the republic of New Haven, including Milford and Stamford, to which Southold on Long Island and Branford were afterwards added (26). Prior to 1640 there were at least nine settlements made, four on the Connecticut River and five others on the shore of Long Island Sound. In the next decade five others were made on the Sound shore and one inland. Between 1650 and 1685 eleven new settlements were made, three on the Connecticut River, one on the seashore and seven not on navigable waters. From 1685 to 1700 eight settlements were made along the eastern side of the State as far north as Windham and two other inland settlements. The harbors of New London, Saybrook, New Haven, Stratford, Bridgeport, Norwalk and Greenwich were all occupied.

Thus, in the seventeenth century at least thirty-eight settlements were made in Connecticut, eighteen on navi-

gable waters and twenty inland. Three of the thirty-eight, however, were "set off" from previous settlements. By 1660 practically all the shore from the Connecticut River to the New York boundary was settled, most of the Connecticut River border as far north as Windsor and an area from New London north above Plainfield. By 1675 these boundaries were considerably expanded but shrank again somewhat, following King Philip's war and expanded rapidly afterwards. In Lois Matthews', "The Expansion of New England," (38), this is very clearly illustrated by maps. By about 1732 practically the whole State was included in settlements or districts claimed by the several communities.

Dwight, (24, Vol. I) says that "exclusively of the country of the Pequots,[4] the inhabitants of Connecticut bought, unless I am deceived, every inch of land contained within that colony, of its native proprietors." The same thing was stated by Governor Winslow in 1676 regarding Massachusetts settlements in his report to the English Committee on Trade and Plantations (26).

This sale and transfer of lands from the Indian chiefs was effected by deeds duly signed and witnessed. Thus in 1638 Quinnipiac, now New Haven, was bought of the chief Momauguin, subject to certain rights of hunting, for one dozen coats, the same number of hoes, hatchets and porringers, two dozen knives and four cases of French knives and scissors.

A little later more land was bought for thirteen English coats (30, Vol. I). The colonists thus obtained a tract more than ten miles wide from north to south and thirteen long from east to west, since divided into Branford, East

[4] The Pequots were nearly exterminated in the Pequot war in 1637.

and North Haven, Woodbridge, Wallingford and Cheshire.

It has been said that the prices paid, always in commodities, were ridiculously small. Ridiculously small the price appears now but the bargain was the free act of the chiefs who, we may believe, considered that some warm clothing and useful tools were worth more to them at the moment than 130 square miles of wilderness in which they still retained some rights.

Part of the later trouble with the Indians probably arose from their misunderstanding of the nature of a deed. In general they may have regarded it as conferring only the right to live, hunt and fish in common with themselves, not as in any way the extinction of their own former rights.

Earlier a fort had been built at Saybrook, for defense against the Dutch, and a grant of lands made under the Warwick patent of 1631.

This was bought by the colony in 1644 from Fenwick, agent of the proprietors.[5]

The Connecticut colonists, almost wholly English, consisted chiefly of squires and yeomen, united rather closely in thought and purpose. There were a few indented servants or "redemptioners" paying for their voyage to America by service, who in time became independent citizens and a few slaves employed almost wholly in domestic service (26).

But it was a community holding substantially the same

[5] The seal of the colony and later of the state, was probably given to it, perhaps at that time, by Fenwick. Originally it represented a vineyard of fifteen vines and above them a hand, issuing from clouds, holding a label with the motto, "*Sustinet qui transtulit.*" To carry out the idea of the vineyard we may translate, without doing more violence to *transtulit* than was done by Columella and Varro. "He who has transplanted maintains."

This seal has since been variously modified, as described in the Report of the State Librarian, for 1912.

religious dogmas, the same political principles and a common heritage.

The desire for religious and political freedom was the chief motive which drove the first Pilgrims and Puritans across the Atlantic, but probably the greater number who followed them saw in the vast unoccupied lands of the new world a chance to make a living unhindered by the turmoils of Europe, and the settlers of Connecticut, as we have seen, urged as a reason for their migration the need of room for further expansion.

The settlers in Connecticut, as in New England generally, with the exception of New Hampshire, unlike those in colonies further south, were owners in fee simple of the lands they occupied.

Community of tillage, to meet their most pressing want of food, had been tried in the mother colony but had been found less effective than private managment of personally owned land.

Individual holdings were at once set off, and for a good while there was much undivided common land used by all the proprietors for pasturage, timber, etc., but there were frequent difficulties connected with this ownership in common which are witnessed by frequent acts of the General Court. Thus very early it was ordered by the towns of Wethersfield, Hartford and Windsor that five able and discreet men from each town should "take the common lands belonging to each of the several towns into serious and sadd consideration and after a thorough digestion of their own thoughts, set down under their own hands in what way the said lands may, in their judgments, be best improved for the common good."

The boundaries of the individual allotments were not very difficult to determine, but those of the separate settle-

ments and towns and of the colony it was impossible to fix accurately for many years. (The exact boundary line between a portion of Rhode Island and Connecticut was first finally determined under Governor Baldwin's administration, 1911-1915).

Dwight, (24, Vol. II, 498) describes the settlement of a dispute regarding land claimed by both New London and Lyme in 1664. The distance, danger and expense attending an appeal to the seat of government, decided the disputants to settle the matter by a combat between two champions selected by each of them. "On a day mutually appointed, the champions appeared in the field; and fought with their fists, till victory declared in favor of each of the Lyme combatants. Lyme then took possession of the controverted tract and has held it undisputed to the present day."

It appears that either this dispute was not finally settled by this trial by combat, or that some new boundary dispute arose, for about the year 1671 there was a "riot" between about thirty New London men who went to Black Point to mow grass for their minister and a party from Lyme who had come on a similar errand.[6]

There was a conflict of tongues, rakes, scythes, clubs and fisticuffs; the voice of the constable was heard in the land—and disregarded. No one was killed though some were bruised. Peacemakers finally prevailed and it was agreed to leave the matter to the courts. "So drinking a dram together with some seeming friendship, every man departed to his home." But both parties were indicted for assault, violence and riotous practices. As it was difficult to get an impartial jury in that neighborhood the accused

[6] This land, 325 acres, had been sequestered in 1671 to the use of the ministry forever (11). In 1668 the same land had been reserved by Lyme for the support of their minister.

were tried in Hartford. Both parties were fined and the fines subsequently remitted.

Regarding the civil government in the colonies; The New Haven Colony was extremely theocratic in its character. Only church members had the franchise and this in New Haven itself excluded one-half of the inhabitants from a share in the government. Each town was governed by seven ecclesiastics, known as "Pillars of the Church." They served as judges without juries because no authority for trial by jury was found in the laws of Moses.

The Connecticut Colony was much less strict in its views of civil government. In the first year it was governed by Massachusetts, but immediately thereafter a General Court was held in Hartford, May 31, 1638, and on May 14, 1639, all the freemen of the towns met in Hartford and adopted a written constitution. "It was the first written constitution known to history, that created a government and it marked the beginnings of American democracy." It made no reference to the king of England or any other government. Under it all rights and powers not expressly given to the General Court were reserved to the towns. It did not prescribe church membership as a condition for the right of suffrage.[7]

In 1643 the four Colonies of Massachusetts, Plymouth, Connecticut and New Haven formed a league, "The United Colonies of New England," including thirty-nine towns with 24,000 inhabitants. The League was given entire control of dealings with the Indians and with foreign powers and the administration was committed to

[7] "The remarkable document, though deserving all the encomiums passed upon it, was not a constitution in any modern sense of the word and established nothing fundamentally new, because the form of government it outlined differed only in certain particulars from that of Massachusetts and Plymouth." "Later courts never hesitated to change the articles without referring the changes to the planters." (3)

eight Federal Commissioners, two from each colony, all to be church members. No permission was asked from the home government. In 1661 a charter was granted by Charles I to New Haven, but by it the colony was annexed to its stronger neighbor, Connecticut, thus reducing the number of the United Colonies to three.

The League continued till 1684 when the Massachusetts charter was revoked by Charles II. In 1687 Charles also revoked the Connecticut charter, but it was never surrendered, and as the order for the surrender of the charter was never enrolled it remained in force and Connecticut was governed under it until 1818.

Concerning the relations with the mother country, we see that the first settlements were made in the reign of Charles I who, on the whole, was rather glad to get rid of a lot of religious cranks and radicals moved to a wilderness across an ocean and three thousand miles from England where they could praise God and fight savages after their own fashion. He was willing to give them charters and then to be rid of them while he reigned without a parliament from 1649 to 1660.

Then followed the Commonwealth and the Protectorate when little thought could be given to

> " * * * that small colony
> Of pinched fanatics, who would rather choose
> Freedom to clip an inch more from their hair,
> Than the great chance of setting England free."

This was a period of prosperity and undisturbed growth. But soon after the accession of Charles II the seeds of disaffection were sown which resulted in the revolution about a century later.

The story of the protection of the regicides in New

Haven and elsewhere, of religious differences, of the work of Andross and Randolph, the attempted annulment of the charter, etc., need not be repeated here.

"The four years from 1684 to 1688 were the darkest years in the history of New England." (Fiske). The advent of King William and Queen Mary in 1689 closed the long struggle with the Stuarts and lessened the tension between the Colonies and the mother country.

Such, in very brief outline, was the physical and political environment of Colonial agriculture in this Colony in the seventeenth century. Before it was settled the land was a wilderness except where it had been partially cleared and subdued by the crude methods of the Indians. The colonists' farming tools were no "better than had the farmers of Julius Caesar's day; in fact, the Roman ploughs were probably superior to those in general use in America eighteen centuries later."

"The mass of production shows no radical difference from that in ages long past." (2) "The Saxon farmer of the eighth century enjoyed most of the comforts known to Saxon farmers of the eighteenth."

But the spiritual comfort, the freedom from vassalage and other forms of tyranny and the joy of self-government made the Connecticut colonist a totally different being from the eighth century peasant.

Nevertheless the earlier years were a fierce struggle against starvation and murderous attack, demanding almost continual manual labor from all members of the community, men, women and children alike.

It is not possible now to give any very precise picture of the every day life of the early settlers or of the course of their agriculture.

"There is but a slender residue from the vicissitudes

of history to throw any sufficient light upon some of the habits, practices and daily concerns of the colonists in the ordinary routine of their existence."

The first care of the settlers was naturally a provision for continuous food supply after the store of provisions which they brought from Massachusetts was exhausted. Wheat,[8] rye and pease had been grown in the Massachusetts and Plymouth Colonies, but the main reliance at first was Indian corn. The reasons are obvious. They had abundance of seed, they knew from the Indian experience that it yielded well and the method of planting and cultivating had been learned from the Indians by the settlers at Plymouth, "being instructed in the manner thereof by the forenamed Squanto."[9]

As to the method of planting corn, Peters, writing in 1781 says, "Maize is planted in hillocks three feet apart, five kernels and two pumpkin seeds in a hillock and between the hills are planted ten beans in a hillock. One man plants one acre a day, in three days he hoes the same three times and six days more suffice for plowing and gathering the crop. The whole expense is thirty shillings and allowing ten shillings for use of land, the whole expense is two pounds, while corn is worth two shillings per bushel." He figures that the gain is seldom less than 300 and often 600 per cent. "It is thus that the poor man becomes rich in a few years," — and it is thus that a parson figures profits for the farmer. But this description of the way of planting corn, though written in the following

[8] In the third generation of farmers wheat had almost passed out of cultivation and was got chiefly from New York and the southern plantations.

[9] Squanto, an Indian who had been carried to England, it is said, by Waymouth, learned the English language and was afterwards returned to his native home, Plymouth. He "proved a special instrument of God for their good, beyond expectation; he directed them in planting their corn, where to take their fish and to procure their commodities." (42)

century and by one to whom Ananias and Munchausen were mere tyros, is substantially correct judging by other accounts and was probably followed from the beginning; being adopted from the Indian practice. It is noted in the old rhyme:

One for the bug,
One for the crow,
One to rot,
And two to grow.

At first fish was the only fertilizer. Three or four fish, (menhaden), were put in a hill "and in them they plant their maize which grows as luxuriantly therein as though it were the best manure in the world; and if they do not lay fish therein the maize will not grow, so that such is the nature of the soil." (42)

The colonists brought seed of other cultivated crops with them for in 1638 among the supplies requisitioned for the force engaged in the Pequot war are mentioned corn, oats, pease and rice, see page — (63, Vol. I).

The colonists, while they were at first chiefly dependent on Indian corn, wanted wheat to which they were more accustomed and in 1640 (9) it was ordered, to promote the production of English grain, that every farmer for every team he owned could have one hundred acres of plow land and twenty of meadow if he seeded twenty acres the first year, eighty the second and the whole one hundred the third.

Of the gardens of the early settlers in New England almost the only account is that of John Josselyn in 1672. (32). (Wood, 78). These accounts do not specifically refer to Connecticut but probably conditions were quite alike in all the New England Colonies.

"Of such garden Herbs, (amongst us) as do thrive

there, Cabbage, Lettice, Carrats, Parsnips of a prodigious size, Red Beetes, Radishes, Turnips, Wheat,[10] Barley,[11] Oats, Pease of all sorts and the best in the world, and Beans. In the gardens Josslyn also finds Sorrel, Parsley, Marygold, French Mallowes, Burnet, Winter and Summer Savory, Time, Sage, and — Purslain, (May Allah blot it out). Red and black currants were grown and gooseberries "grow all over the countrie" (31). Coriander, Dill, "annis," "sparagus," Pepper wort, "Tansie," cucumbers and melons also grew.

Obviously the settlers very quickly provided themselves with a variety of vegetable foods and with "English roses very pleasantly."

There was also an abundance of fruit; plums, wild cherries and various berries growing everywhere. Carrier, (10), quotes Roger Williams, "In some parts where the natives have planted, I have many times seen as many (strawberries) as would fill a good ship within a few miles compasse: the Indians bruise them in a mortar and mix them with meale and make a strawberry bread."

Josselyn, in 1638-1639, found no apple or pear trees anywhere except on Governor's Island in Boston harbor where he got "half a score of very fair pippins." But on his second voyage, thirty years later, he says that the finest trees prosper abundantly, apple, quince, cherry, plum and barberry and "the country is replenished with fair and large orchards."

Perhaps the most particular account is that of the orchard of Henry Wolcott in Windsor. This was in bearing

[10] Both winter and summer wheat were grown, the former accepted for taxes at five shillings, the latter at four shillings per bushel, with corn at two shillings six pence.

[11] As early as 1646 barley was grown in Wethersfield, probably chiefly used for making malt for beer, an article of general consumption. (64)

before 1649. Summer Pippin, Holland Pippin, Pearmain, "Belly Bonds" (Belle et Bonne), and London Pippin are varieties named. He also sold orchard trees, both apple and pear, as early as 1650. (65). The price of apples fell in Windsor from eight shillings the bushel in 1650 to two shillings sixpence to three shillings in 1654.

Josselyn was told by Wolcott that he made five hundred hogsheads of "syder" from his own orchard in one year, sold for ten shillings per hogshead, and that in 1654 he got 1,588 bushels of apples from his own orchard. Cider, beer and other spirituous liquors were drunk in large quantities in the Colony. Cider and beer were the common table beverages. Tea and coffee were very rarely to be had before 1700 if at all.

"It has been truly said that fruit growing in America had its beginning and for almost two hundred years its whole sustenance in the demand for strong drink."

"As early as 1643 there was a weekly market in Hartford and many towns established fairs or markets held once or twice a year for the sale or barter of all kinds of commodities.

The houses of the early settlers, according to Hollister, (30), were of wood and those of the more prosperous, after the first thirty years, were framed. The frames were of heavy oak timbers, some of them eighteen inches in diameter. The rafters were larger than the sills or beams of present day houses and supported slit sticks, called "ribs," to which were fastened long, reft, cedar shingles. The siding was of oak clapboards, reft and smoothed. Only the sides of the rooms were plastered. The floors were of oak. The windows were of two small leaden frames with diamond-shaped panes and hinges opening outwards. The outer doors were of double oaken

planks, made as solid as a single piece by nails or spikes driven into them in the angles of diamonds. The rooms were seldom over seven feet high, with enormous fire places and a stone chimney. The buildings "are generally of wood, some of stone or brick, many of good strength and comelynesse, for a wilderness." (15, III. 1680).

Time was reckoned by farmers according to the working seasons as well as by the calendar. Events happened at "sweet corn time," "at the beginning of hog time," "since Indian harvest," etc. (3)

The need of textiles was early felt. In 1640, (15, pp. 61, 64, 79), every family was required to get and plant at least one spoonful of English hemp seed in good soil, at least a foot between each seed "and tend it in husbandly manner." The next year each family that kept a team was to sow one rood of hemp or flax. Every family which keeps cows, heifers or steers was to sow twenty perches. Every family with no cattle shall sow ten perches and tend it properly and every family was to provide at least half a pound of hemp or flax.

In 1675 (15), to encourage the production of rape oil, the monopoly of its manufacture was given to William Roswell for ten years.

The Court gave a subsidy of two shillings per acre per annum to each person sowing cole seed up to eighty acres. This was to continue for ten years. Tobacco was grown prior to 1640 and in that year an act forbade the "drinking of tobacco." Later a statute restricted its use to that grown "within these liberties." This act was repealed four years later. In 1680 a duty of two pence per pound was levied on imported tobacco. In 1680, (15, Vol. III), the Colonial authority reports, "Most people plant as much tobacco as they spend." Honey was raised in

Wethersfield as early as 1648. In 1650 an inventory includes "11 skipp of bees," valued at nine pounds, (40, p. 622).

The colonists very quickly supplied themselves with cereals and vegetables. Naturally to get an adequate supply of live stock required much more time. The first settlers from Massachusetts brought with them one hundred and sixty head of live stock and later settlers no doubt brought many more. Wild hogs are mentioned in the early records which may have been relics of the first adventure to Windsor in 1633 to 1635. Breeding naturally increased the number of swine more quickly than of dairy stock and as early as 1637 pork was one of the supplies furnished to the force which fought the Pequots.

The keeping of dairy stock, sheep and horses was handicapped by the scarcity of good hay land and pasture. Eliot notes, (25), that the first settlers by tide water had so much salt marsh mowing that they improved the land nearest at hand and when, with growing population more was needed for meadow they made use of old land without breaking up more.

Salt marsh is neither good pasture nor is its hay the most suitable for feed. Of the meadow and pasture grasses at present used in Connecticut all, with possibly one or two exceptions are introduced species (10). To establish good mow land or even good pasture in a new country, having only rather inferior herbage, was a work of considerable time. Even in Eliot's time good hay was scarce.

In the revision of the Colony laws in 1672 to 1673 an act required every male between forty and seventy, fit for labor, excepting certain magistrates or ruling elders, physicians and school teachers, to work for one day in

June, cutting and clearing land as directed by the selectmen for the encouraging of sheep raising. Nine years later the law was modified, authorizing the townsmen to call forth their inhabitants at such time as they think best to kill the brush.

Before considering what was wrought by this colony of farmers in the first sixty or seventy years of their struggle with the wilderness there should be noticed in particular some of the hindrances and obstacles to progress which had to be overcome.

As has been said their field and garden tools, either brought from England or else made on the same pattern at home, were of the simplest sort; none of them, except a clumsy plow, of a kind to use with draft animals. Sowing, cultivating and harvesting were all done by hand.

Their farming tools, moreover, were of a kind designed for tilling soil long under cultivation, not for subduing forest land or scrub growth.

Though at first, as a rule, the Indians were not very unfriendly to the colonists, their attitude soon changed. The pushing of settlements inland incommoded the Indians. They had further embarrassed themselves by parting with much of their cleared land and these things, together with their innate joy of plunder, murder and torture soon made them a menace to the settlers. Robbery and murder became frequent.

The Connecticut settlements were chiefly harassed by the Pequots and in May, 1637 an expedition left Saybrook and near Groton met the Pequots in their fortified place and after a severe fight killed nearly seven hundred of them, only five escaping alive (26).

But another account says that in the Pequot fight at "Mistick" at daybreak they took the fort after two hours'

fighting, by firing it, slew the two chief sachems, one hundred and fifty fighting men and one hundred and fifty old men, women and children, with the loss of two Englishmen. (65).

Hon. John H. Perry, in a paper on "The Great Swamp Fight in Fairfield" states that the remnant of the Pequot nation immediately started to migrate to the Hudson and passing westward was overtaken and besieged in a swamp in Fairfield. There were eighty strong men with two hundred women and children. Loath to destroy the women and children, under a truce two hundred old men, women and children were allowed to come out and surrender. After a fight, not very sanguinary, about sixty or seventy Indians broke through and escaped. This ended all trouble with the Pequots.

After this there was no further organized fighting with the Indians for thirty-eight years.

The expedition from Saybrook was provisioned from the various Connecticut settlements and commanded by Captain John Mason who reports, (5), "Our commons were very short, there being a general scarcity throughout the colony of all sorts of provisions" — "we had but one pint of strong liquors among us in our whole march" — "(the bottle of liquor being in my hand) and when it was empty the very smelling to the bottle would recover such as had fainted away, which happened by the extremity of the heat."

In spite of this victory, individual cases of robbery and murder were not infrequent and the farmer needed to keep his weapons constantly ready for use. As when Nehemiah rebuilt the walls of Jerusalem, "Every one of them with one of his hands wrought in the work and with the other hand held a weapon." In 1643 it was noted that

"The order for one in each family to bring his arms to the meeting house every Sabbath hath not been fully attended to."

King Phillip's war began in 1674 and in this the Narragansetts joined.

The Great Swamp Fight, near Kingston, Rhode Island decisively defeated the Indians but in 1676 Philip was again on the war path and there were massacres in Massachusetts and Rhode Island; but in June, in a series of fights, three or four hundred of the Narragansetts were killed and later in the year Philip himself was hunted down and killed. By 1688 the Indians were generally suppressed (26). But Dwight (24, Vol. I), states that with the Indians the colonists had to contend from 1675 till 1783 and within this period there were seven wars with them; five stimulated by the French, King Philip's war and the revolution.

In King Philip's war little damage was done in this state but its armed forces were used in defending other regions from the common enemy.

Besides the threat from the Indians, wild animals were a great annoyance and did much damage so that bounties were almost continually offered for their destruction. In Windsor in 1647, (5), a panther killed nine sheep in a yard. He was tracked and killed for which a bounty of five pounds was paid as allowed by law. Wolves were the most common and persistent pests. From the beginning to the end of the century bounties were paid for their destruction ranging from eight to thirty-two shillings per head. In 1640 by the town of Hartford "It is ordered yt Learance Woodward shall spend his Time abought killing of wolfes & for his Incoragmentt he shall have 4s 6d a weeke for his bord in casse he kill not a wolfe or a

deare in ye weake; but if he kill a wolf or a deare he is to pay for his bord himselfe & if he kill a deare we are to Have it for 2d a pound," (14, VI). (Fearlessly this scribe flouts all old world traditions in matters of orthography and blazes a new way for the speller, with the freedom of the new world, to the joy of his readers in all generations.)

In 1693 Stratford voted a wolf hunt, with a bounty of three shillings per day for horse and man. A day was set, all to be ready at seven A. M. on the hill at the meeting house by the beat of the drum. No record is given of the killing (49, p. 289).

Blackbirds were also a nuisance and a bounty of ten shillings per thousand was paid for their destruction. Even flocks of wild pigeons were destructive to grain.

As early as 1644 wheat blasted in Connecticut and New Haven, (75, I.), and in 1679, (15, III.), there is complaint made of "an unaccountable blast on wheat and pease." Later in an election sermon, (15, III.), reference is made to God's smiting with "blasts, mildews, caterpillars, worms, tares, floods and droughts."

In a report by the Governor to the British Committee for Trade and Foreign Plantations, he says: "Besides for sundry years past the holy providence of God hath smitten us year after yeare & these three or four yeares past there is a worm breads in sd. pease which doth much damnify them so that we are like, (by reason of said losses at home and the heightened price of goods from abroad), to remain a poor but loyal people."

There were besides, the usual vagaries of weather and miscalculation of the crops most needed, which caused serious discomfort.

In 1637 there was scarcity of corn due to Indian dis-

turbances and the absence of men engaged in the Indian war. The colonists were forced to buy corn of the Indians in Massachusetts. Corn rose to twelve shillings per bushel, but fifty canoes came down later from Deerfield, Mass., which gave great relief. Again in 1638, (15, I.), it was necessary to import corn which it was ordered to "goe" at five shillings six-pence in money, in wampums at three a penny, six shillings per bushel, or in beaver at nine shillings per pound.

In 1643 Winthrop reports that corn was very scarce all over the country because of a cold, wet season, ravages of pigeons and mice in the barns. The mice also damaged orchards by girdling the trees.

But the next year there was a glut of corn, prices fell and the growers were forbidden by the General Court to sell "out of the river" except to two agents who were to pay four shillings per bushel for wheat and three for corn and rye and who undertake to transport it over seas. This overproduction may have been due, in part at least, to the extraordinary bounty offered in 1640. The merchants are to pay on the return of the ship or as soon as return may be otherwise made in the best and most suitable English commodities. Subsequent lawsuits prove the failure of the scheme. This was the end of the first "pool," undertaken to foil the "middleman" and by government action to sustain prices in a time of over-production.

In 1662 it was forbidden to convey away out of this river any corn or provision from any plantation on this river. 1675 was another lean year as far as the staple corn was concerned. The Colony, in reply to the Massachusetts authorities, say they will supply what provision for the army as they can, "but corn being very scarce with

us and the seat of war within our borders, we cannot do all that is desired."

Regarding the population of Connecticut in this century we have no exact figures. The most reliable estimate is as follows (72, p. 9):

In 1640	2,000	1680	13,000
1650	6,000	1690	18,000
1660	8,000	1700	24,000
1670	10,000		

"We compute the Indian neighbors of this Colony to be about 500 fighting men" (1680). At this time there were not above thirty slaves in the Colony.

In a community without extensive trade or business relations with other sections of the country, a community almost exclusively engaged in tilling the land and business immediately concerned with it, current money was scarce. We find therefore in the records of the General Court and of town governments schedules of rates at which country produce might be used for payment of a part (often one-third) of taxes.

Thus the highest exchange price for winter wheat was five shillings per bushel, in 1677 and 1698. The lowest was four shillings in 1653.

Corn exchange prices ranged from two to four shillings, rye and pease from two to three shillings sixpence per bushel (15, III). Apples were quoted in 1653 at two and a half to three shillings per bushel.

It remains to consider the condition of agriculture in the Colony at the end of the seventeenth century. The condition of agriculture was the condition of the Colony, for while the settlers on the sea and river coasts began

trading and commerce,[12] yet agriculture, with lumbering, stock raising and dairying as the chief business aside from tillage crops was the almost universal employment.

The State was secured against the Indians and was increasing in population and the area of tilled land. There is no evidence of an improvement in the farming tools used. The food crops and the vegetables of England were raised with success and productive orchards had been established. The quality of the meadows and pastures was very poor, there being no meadow grasses which were well suited for dairy stock.

Governor Winthrop of Massachusetts writes in 1660 to an English correspondent (37, VIII), "Now the country doth send out great store of biscott, flower, peas, beife, butter and other provisions to the supply of Barbados, Newfoundland and other places, atc." "This country is now well stored with horses, cowes, shepe and goates." No doubt the production and commerce of the older Colony was much larger than that of Connecticut but Connecticut shared in the general prosperity of the New England Colonies.

In the same year Maverick (cited by Whedon, 75), says, "For the southern part it is incredible what has been done there." "All through the land there was plenty of pears, apples and other fruit, muskmelons, watermelons, etc."

A fair idea of the progress of agriculture may be gleaned from the report of the Governor of the British Committee on Trade and Foreign Plantations in 1680. He states that the commodities of the country are peas, rye, barley, Indian corn and pork, beef, wool, hemp, flax,

[12] In 1680 there were 27 vessels owned in the state, the largest of 90 tons, with a total tonnage of 1,030 engaged in trade from river and coast ports.

cider, perry and tar; deal boards, pipe staves, horses. What was produced above the local demand was mostly transported to Boston and there bartered for clothing, though some small quantity was shipped to Barbados, Jamaica and other of the West Indies and there bartered for sugar, cotton and rum. For material for shipping there is good timber of oak, pine and spruce for masts, oak and pine boards, tar, pitch and hemp. "We are but a poor people, we have lost and spent much of said estates in the last Indian war. Said expense with our loss cannot be estimated less than 30,000 pounds and no other advantage gained by it than the riddance of some of our bad neighbors . . . For the most part we labor in tilling the ground and by that time a year's . . . and labor hath gathered some small parcel of provision and it is transported to the market at Boston and then half a crown will not produce so much goods of any sort as ten pence within England."

"We cannot guess as to the number of acres unsettled. Most that is fitt for planting is taken up. What remaynes must be subdued and gained out of the fire as it were, by hard blowes and for smal recompense" (15, Vol. III).

The history of agriculture in Connecticut would not be quite complete without this note. In 1644 "The proposition for the releife of poore schollars att Cambridg was fully approved of, and thereupon it was ordered, thatt Josua Attwater and William Davis shall receive of every one in this plantation whose hart is willing to contribute thereunto a peck of wheat or the value of itt." In 1645 Mr. Attwater reported that he had sent from Connecticut forty bushels of wheat for the college at Cambridge although he had not received so much. In 1647 "The Governor propounded that the Colledge corne might be

forthwith paid — it will be a reproach that it shall be said New Haven is falne off from this service."

It is interesting to note the attitude of the legislative body towards tobacco and alcoholic beverages in the seventeenth and eighteenth centuries and to compare it with the attitude at the present time.

Tobacco was grown in the Colony as early as 1644, rum was imported from the West Indies and later made in the State from the juice of cornstalks, though never to any great extent. Intoxicants were freely used in the community by clergymen and all classes of their parishioners. President Stiles of Yale College enumerates among the wonderful orderings of divine Providence which conspire towards the establishing of the independence of America, "Heaven has led us to the successful experiment on corn stalks from whence it is probable may be made an abundant supply of molasses and rum for this whole continent." Cider was a common beverage in the family and was not by any means a spiritless drink. Licenses were required for selling strong liquors and the maximum prices were fixed by statute (15, IV).

Captain John Mason, as we have seen, found use for strong liquor in the Pequot War. In 1780 Congress called for army supplies from this state and among them were named 68,558 gallons of rum.

But tobacco, so vigorously condemned by that misocapnic sovereign, James I, in his Counterblaste of Tobacco, was barred by the Colony.

In 1647 it was ordered that no one shall take tobacco publicly on the street or in fields or woods unless when he is on a journey of at least ten miles, or at the time of repast commonly called dinner, or if not taken then, not above once a day at most, and then not in company with

any other. By the code of 1650 persons under twenty-one and all others not already accustomed to it were forbidden to use the weed without a physician's certificate. No one could publicly use tobacco on streets, highways, in barns, or on training days in any public place. There was however a gradual decline in tobacco morals for in 1680 its use was restricted to that grown in the Colony and in the next century tobacco became a considerable article of export and inspectors were appointed to see that only merchantable tobacco was sold.

In the twentieth century the pendulum which marks the effort to promote temperance in individuals by legislative acts has swung to the other extreme. Tobacco is used everywhere by clergymen, physicians and all classes in the community, both men and women, but the making, selling or carrying of any alcoholic beverage or bringing it within one hour's steaming distance of

" * * * thee,
Sweet land of Liberty"

is contrary to the Constitution and statute and punishable by fine and imprisonment.

It would seem that the pendulum could hardly swing further in either direction and may come back to the region of temperance in habits, legislation and language.

Agriculture in the Eighteenth Century

This period witnessed great changes in Connecticut, political, religious and economic.

The danger of extermination by Indians was wholly past. They continued for some time to be a plague, inclined to plunder, but in 1763 the Governor reports

(Appendix to the Public Records), that the Indians are "in peace, good order and inclined to idleness."

Nor was the Colony any longer threatened by a very dangerous lack of food.

Trade increased and manufacturing began on a moderate scale.

As late as 1790 it is probable (72) that nine out of every ten bread winners in the State were engaged in some form of agriculture. A century later only three out of ten. At the close of this century ninety-eight out of every one hundred of the New England population could trace their origin to England in the narrowest sense.

The following figures of population in Connecticut (72) "may be accepted as expressing the best judgment of students of history and statistics at the present time" (1909).

In	1700	24,000	
	1710	31,000	
	1720	40,000	
	1730	55,000	
	1740	70,000	
	1750	100,000	
	1760	142,000	
	1770	175,000	
	1780	203,000	
	1790	237,635	

Up to the Revolutionary period there was an average increase of about 33 per cent in each succeeding decade. From 1770 to 1790 the increase per decade averaged only about 18 per cent. This increase, reports the Governor, "Under the Divine benediction we attribute to industrious, temperate life and early marriage."

In 1713 two-thirds of the area of the State was settled, and by 1754 the whole State was occupied.

The housing of the colonists became more substantial. Brick was more often used in building. As late as 1770 brick was imported from England and Holland, perhaps as ballast. But most bricks in Colonial buildings were

made at home. (As early as 1639 the Henry Whitfield house in Guilford was built of stone and is still standing.)

The household in New England generally was a self-sustaining unit.

There was little care for ornament or design. In the first half of the century, at least, the household furniture was likely to include shoemaker's tools, leather tanned in the neighborhood, surgeon's tools and apothecary's stuff, occasionally carpenter's and blacksmith's tools, and a cider press. A spinning wheel was almost always in the house and often a loom. The wood turner made plates, etc., from "dish timber," probably poplar or linden (10).

At this time "through New England men, women and children wore homespun; linen shirts, tow cloth skirts and breeches and woolen socks. Buckskin and lambs skin breeches were common." Coats for heavy weather were made of deerskin. These statements represent conditions in the first half of the century among even well-to-do farmers throughout the Colony. There was, of course, a small fraction of the people, living near centers of intercourse and trade whose houses and dress were more elaborate and the dress of all classes gradually improved in material later in the century.

Cereals and meats of all kinds were abundant but there was no means of keeping either meat or vegetables in fresh condition. Many families lived through the winter on smoked, salted and pickled food. But milk, butter and cheese were available. Fruit, such as apples, could be kept well into winter. Housewives pickled Indian corn and other vegetables, nuts and oysters, they dried apples and made "apple butter." Beer, cider, brandy and rum were the ordinary beverages.

Beer was brewed at home and spruce beer was used at sea against scurvy (4).

From 1715 to 1750 a great change came over the Colonies. "No war, no constant danger from the French or Indians, no menace to shipping on the seas." Hanoverians came to the English throne and there followed what Burke called "a wise and salutary neglect." "The home government giving up the idea of rigidly carrying out the laws of navigation and trade, suffered a generous nature to take her own way to perfection."

Thus the colonists entered on an era of progress and consequent prosperity.

The clearing of land, raising food, producing clothing, with the establishment of commerce, by which some necessities and comforts were provided which it was not possible to make at home, were practically the whole business of the inhabitants, until the final struggle for independence in 1776, when a seven years' war and six years or more of labor in organizing and establishing a civil government left little time or thought for improvement in the methods or tools of agriculture which marked the next century.

The only plow in use, up to the nineteenth century was an unwieldy, heavy, wooden affair. The harrow was wooden, with wooden pegs (45). The farm tools were made locally; rakes, forks, axe helves, shovels with wrought iron edges, flails, baskets and yokes, cheese presses, bowls and paddles (53).

The means of transportation were, of course, very limited. Carts with one or two horses were used on the farm, but oxen were preferred for the heavier work.

Pleasure carriages were first seen in Middlesex County about 1750 (16), and in Litchfield in 1776 and there

were few there until after the Revolutionary War. In 1761 there were only four "chaises" in New Haven.

New England soon became a network of roads and highways, with main routes connecting important towns, country roads and lanes, pent roads and private ways leading to outlying sections (4).

Connecticut roads had a bad reputation. There were few bridges, troublesome ferries and much soft and rocky ground. They were referred to by travellers as "most miserable" and "most intolerable."

These conditions were considerably improved in the latter part of the century and bridges over the larger rivers were more common. As roads are the subject of another paper in this volume no further notice of them is needed here.

As to the principal crops raised in the eighteenth century:

Indian corn continued to be the chief staple crop both for family use and for stock feed. Eliot raised 60 to 70 bushels to the acre and the following year 90 bushels. The Rev. Peters (52), says 40 to sixty bushels are raised on even land; 30 to 40 on hilly land, but this latter weighs 13 pounds to the bushel more than that raised on river land. Dwight, writing in the early part of the nineteenth century, (24, Vol. I), says the average yield of corn is 25 bushels but he has seen crops of 118 bushels.

It was hoped to make the stalks available for the manufacture of molasses. Stiles notes (62), "This is done with only the Topping of the corn without damaging the Ear or Grain. In old York, 8 M. from Portsmo. are erected last week two Mills consisting of three plane Wooden Cylinders with the Improvement of Cogs atop. In these Mills they have already made considerable Mo-

lasses from Corn Tops and some of the Molasses has been distilled into good Rum. It is said that the Produce is at the rate of two Bbls. Molasses to an acre of Corn." "At Dr. Gales in Killingworth, As I had first tasted good Molasses, 21st. Oct. at Greenfld made of Cornstalks, so here Dr. Gale first showed me Spirits made of the Juice which I tasted and also saw it sink Oyl." (62, Vol. II). And later on, "At Middletown ten thousand gallons of stalk juice were delivered in this fall to one distillery which distilled near a thousand gallons of good rum."

The business began much earlier in the century. In 1717 (75, Vol. II), the General Court granted the sole right to make molasses from Indian corn to Edward Hinman of Stratford. It does not appear that this business ever became extensive.

Wheat was considerably grown until the appearance of the Hessian fly when wheat growing was nearly abandoned. There were few varieties grown of both summer and winter kinds. "But corn is very much the staple and a scarcity of it affects the country more than a failure of wheat."

Dwight, (24, Vol. I), says that the Hessian fly first appeared in New England in 1787, entering Fairfield Co. and advancing about twenty miles a year. Peters says that wheat generally yields from 20 to 30 bushels per acre (52). Dwight puts the average production at 15 bushels though he has known of 40 bushels per acre.

Rye and barley were also grown.

Regarding forage, Eliot, in 1749, (25, Vol. II), complains of the scarcity of hay and corn which is increasing. The stock of the country has outgrown the meadows so that the high price of hay limits the live stock. In a hard winter the scarcity of hay must be made up with corn

and rather than lose cattle the farmers pinch their families.

He mentions only two grasses native to the country, Herd's grass or timothy and Foul Meadow grass, which he pronounces to be much the best of the two. The seed of these and of clover could be bought in market in 1765. The lack of good meadow both for pasture and hay continued till the beginning of the nineteenth century. "Agricola," writing to the Connecticut Courant, March 3, 1784, says: "The parching heats to which this country is exposed often occasions a want of summer pasture as well as winter fodder. It is therefore of the utmost moment that the American cultivators should be informed that artificial meadows constitute one-half of the rural riches of Europe." He states that any farmers who wish to experiment in the matter may get the seed from Normandy by applying to the French consul's office for which the only charges will be its purchase price in Normandy with land carriage from Caen to Port l'Orient. This is made possible by the generosity of His Most Christian Majesty, the King of France. He then discusses the merits of clover, sain foin, lucerne, (alfalfa), and Hyvernage, a species of winter vetch.

The time of the introduction of potatoes seems to be somewhat uncertain, probably between 1705 and 1750 (10). Andrews states, (4), that they were not introduced until after the advent of the Scotch-Irish in 1720, and they did not for some time become a common vegetable.

A few appear, probably as a curiosity, at a Harvard dinner in 1708 (75). Trumbull gives the date of their introduction into Connecticut as 1720 (70, Vol. I). They were first seen in Windsor in 1760 (65), and were little

used there till after the revolution; (53), but a correspondent in Saybrook writes to President Stiles in 1767, (61, p. 463), "We improve in potatoes in this colony exceedingly. Many farmers raise 500 (bushels) per An. I don't think myself stored without 150 bushels per An. They make butter and beef and store excellently well."

Wethersfield is the traditional home of the onion and there is record, (64), of their being an article of trade as early as 1710. Later large quantities were raised here and shipped to New York.

In 1780 Wethersfield citizens protested against an act of the Committee of Public Safety which forbade shipment or sale of produce outside the State. Anticipating a great demand Wethersfield had raised more onions than ever and many more than the army and navy could use, and the excess they could neither sell nor barter for the selling to army and navy had to be done through an agent of the government who would take only a moderate share of the crop. The growers were therefore in great distress.

A traveller notes in 1788 that "Wethersfield is remarkable for its vast fields uniformly covered with onions, of which great quantities are exported to the West Indies."

The common garden vegetables and herbs as we have seen were usually raised in the preceding century.

Maple sugar was made in Norfolk and Goshen and probably in many other parts of the Colony. In 1774 16,000 pounds were produced in Norfolk and in 1784 a third more (62, Vol. III).

As we have seen, fruit, particularly apples, were grown in considerable quantity early in the settlement and were used largely for making cider. The planting of orchards

apparently increased with the increasing quiet and prosperity and more attention was paid to the finer varieties.

Dudley, states that in 1726 Pearmain, Kentish Pippin and Golden Russetin were esteemed apples in New England and Orange and Bergamont were cultivated pears. It is likely that at first many of the apple trees were seedlings and their fruit was mainly "cider apples" rather than good eating varieties. In a paper on the Pioneers of Pomology in New Haven, (44, Vol. I), the author says that Benjamin Douglass was the first propagator of fine fruit in New Haven known to him. In 1775 he planted 64 cherry trees, all grafted, White and Black Ox Hearts, Honey Heart and May Duke. In 1780 or soon after grafts of Delancey pear and a large, sweet, red apple were distributed and the pear, called Jonah, was still alive in 1865.

Nathan Beers, before 1779 grew Catharine, Jargonelle, Warden, St. Michael's Bergamont and many other pears. T. S. Gold of West Cornwall reports (21), that he has a Seeknofurther, grafted near the ground, the last survivor of an orchard which he believes was set out in 1760.

Of other than food crops, the growing of flax, hemp, silk and broom corn was undertaken with more or less success. Broom corn was early cultivated in Wethersfield and in 1797 the first broom was made from this plant (64). It is matter of tradition that Benjamin Franklin introduced this plant in 1781 from seed which he saved from a whisk broom that came from the West Indies. Previously brooms were made from splints.

Hemp was greatly needed for cordage for the vessels built on the coast and the Indian hemp was not satisfactory in quality or sufficient in supply. The growing of English hemp became necessary. In 1734, (15, Vol. VII),

the Colony offered bounties for good, well-dressed, water-rotted hemp in lots of not less than 50 pounds, raised in the Colony and for "well wrought canvas or duck." In 1740, (10), every family was ordered to get at least a spoonful of English hemp seed and "sow in some frutfull soyle, at least a foote distant between every seed, and the same so planted, shall presarve and keepe in husbandly manner for supply of seed for another yeare."

Later bounties were offered by the court for fine linen cloth woven in the Colony. In 1787 the State ordered that forty shillings per acre of land on which hemp was raised should be abated by the assessors on the tax of said land and after 1789 a duty was to be laid on imported hemp.

More important to the families of Connecticut was flax. Cotton goods were very scarce. "Cotton wool" had long ago been imported from the West Indies in very moderate quantity but it was used not for making cotton fabrics but for the lining of vests to be worn as a protection against the arrows of the Indians. In 1643 every family in New Haven plantation was required by law to have a coat of cotton wool well and substantially made, "so as it may be fit for service and custom"; and probably the law required this until there was no longer danger of an Indian attack.

Until the beginning of the nineteenth century the common wearing apparel, at least outside the centers of population, as well as other household fabrics, were homespun and spun and woven by the family or the immediate neighborhood from home-grown wool and flax. In some places this home weaving continued well into the nineteenth century but probably little flax was grown after 1830. Apparently it was grown on a considerable scale

for a time for its oil and the cake from the presses was used for feed as it is at the present time.

The growing of mulberry trees and silk worms and the manufacture of sewing silk and silk fabrics was an industry which had its rise and considerable development in this century. Stiles states that the first silk worms raised in New England were grown by Rev. Dr. Wigglesworth of Harvard College about 1727. The industry began in Connecticut about 1732, (12), and was not abandoned till about 1840.

In 1734, (15, Vol. VII), the production of silk was encouraged by bounties offered by the Colony for the production of sewing silk and silk fabrics from silk worms bred and nourished within the Colony.

In 1747, Governor Law wore the first coat and stockings made of New England silk and in 1750 his daughter wore the first gown made of the same material. Governor Leete raised silk and wore a suit of it about 1783.

President Stiles of Yale College took great interest in the project and probably did more than any one else to make possible a chance of success in the industry, by his careful studies in breeding and feeding the worms and in getting mulberry trees planted throughout the State, the foliage of which is the sole food of the worms. In the library of Yale University is a manuscript volume with the title, "Observations on the Silk Worm and the Culture of Silk, A. D. 1763, Being the Journal of an Experiment in Newport, R. I., in the Summer of 1763 in Raising about 3,000 Silk Worms. By Ezra Stiles." He spared no manual labor, nor painstaking observation of his worms and kept a full record of his daily observations. These cannot be further noticed here, but it is pleasant to see that this eminent divine named the three worms

which he had under very particular observation, for convenience of reference, General Wolfe, Oliver Cromwell and Yeo. "General Wolfe and Oliver Cromwell, his companion, very sluggish, eat a little or rather nibble." "Yeo has not yet settled himself. Oliver in indolence below." etc.

In 1788, 1789 and 1790 Stiles sent to each of eighty ministers in the State enough mulberry seed to grow 4,000 trees, with the understanding that at the end of three years three-quarters of them shall belong to the planters and the others distributed by the minister gratis in his parish. In 1784 the State offered bounties for growing mulberry trees under suitable conditions. In 1789 a writer in the Connecticut Courant states that there were about 12,000 mulberry trees in the State. Silk culture was begun in Mansfield and neighboring towns as early as 1760 and there it maintained its foothold until about 1840.

The largest amount of reeled silk produced in any one year in Mansfield is stated to have been 7,000 pounds, but in general not above 3,000 pounds. The New London Gazette, of March 31, 1769, states that William Hanks of Mansfield is now "cultivating a large vineyard and last year raised silk sufficient to make three women's gowns." A very limited amount of silk was produced in many places through the State until about 1835 when a silk bubble business grew rapidly until about 1839 or 1840 when it burst and ended silk culture in this State. The *Morus multicaulis* is a mulberry growing more rapidly and having much larger leaves than the black or white mulberry which had been grown hitherto. Nurseries of the *multicaulis* were established and the prices of trees rose from one and two dollars apiece to as much as $300 to $500 per hundred. In 1839 the nursery men suffered from the

financial panic of 1837 and it appeared that the *multicaulis* was not hardy enough for the northern states. Prices went to pieces and many nurseries were ruined. To close the whole story a fatal blight of the mulberry trees became common all over the country which resulted in the death of the worms and the practical abandonment of the business. But the failure of silk production was inevitable even if there had been no panic and no *multicaulis*. The feeding of silk worms can only be successfully carried on where hand labor is exceedingly cheap and abundant and the scale of living is very low.

Tobacco had been grown in Connecticut in the preceding century for home consumption but in the eighteenth century it had become an article of export. In 1753 inspectors were appointed to pack all tobacco which was offered for sale. Stiles states that tobacco was packed in hogsheads and shipped to the West Indies. It sold for five-pence the pound. The date is not clear but probably before 1768.

The acts of Connecticut published in 1784 provide that "Whereas Tobacco is or may be a considerable Article of Exportation and ought to be under such Regulation as to prevent Fraud therein," each town was to elect two or more surveyors or packers of tobacco, "who shall carefully survey and search the Tobacco by them to be packed and shall cull out and separate all such Hands of Tobacco as are in Whole or in Part damnified in any way or by any means whatever: and shall pack or press no Tobacco but what is judged by him to be sound, well ripened, sufficiently cured and every way good and merchantable." The packer is required to brand each cask or container which he packs with the first two letters of his name and with the name of the town wherein he dwells.

No one may pack his own tobacco or transport any unbranded tobacco.

The object thus sought in 1784 is one of the aims of the Connecticut Valley Tobacco Improvement Association very recently established in this State.

Along with the more strictly agricultural business of the farmers of the Colony should be mentioned the tapping of pine trees and the making of tar, pitch and turpentine which, used to some extent at home, were articles of export.

From the earliest days sheep and hogs were commonly raised and their numbers increased easily and rapidly. Pork was sufficiently abundant to be exported. More sheep were raised in Connecticut, (in 1781), than in any two of the other colonies. "Their wool is better than in other colonies but not so fine or good as the English" (52). The wool used for clothing or bedding was spun and wove in the separate families. In 1774 the General Court notes that "It is practiced by some particular inhabitants to turn large flocks (of sheep) on the highways with a keeper and thereby eat up and destroy the herbage therein to the great detriment of the poor inhabitants of such towns," and orders that no one shall turn more than fifty on the highway without getting permission from the town (15, Vol. 14).

The number of cows increased more slowly but butter and cheese were exported, at least in the latter part of the century.

The town of Goshen early established a reputation and foreign trade in cheese which will be noticed later.

Trouble from wolves continued through the eighteenth century, though their number was very materially reduced and at its close was probably so small as to make the

damage done by them infrequent. Bounties were offered for their destruction partly by the Colony or State and partly by the town, as high as fifteen pounds, "old tenor," in 1750, three pounds in 1784, which represent the extremes.

When Goshen was settled about 1730, bears, raccoons, wolves and foxes were plenty and for a long time thereafter. Beavers were also found.

The wolves were especially troublesome and injurious.

In 1784 four wolves appeared one Sunday in the vicinity of Norfolk and fearing for their stock an alarm was given to the congregation in church. About eighty men turned out and after a chase got all the marauders. The church service was over, for them, and "the whole party then retired to an Inn and spent the day in joy and festivity" (5).

Bears were taken in Litchfield County between 1760 and 1770, (16) and wild cats occasionally destroyed sheep and lambs. About the same time (5), a bear was killed in Bethany which had destroyed calves and bee hives and even had the effrontery to enter a house and lap up the milk and cream. A panther, (5), in 1767, which had killed nine sheep in a yard at Windsor, was tracked and killed.

Dogs, first cousins to the wolves, had become common and developed that fondness for mutton which their age cannot wither nor custom stale.

In 1738 a law provided that if a selectman declared that evidence of harm to sheep or cattle was, in his opinion, satisfactory, the dog concerned might be killed and the owner be liable for damages. Any dog found at large in fields or woods without a master might be lawfully killed.

Various other laws regarding damage by dogs were passed from 1716 to 1786.

A minor pest, then as now, was mice which occasionally girdled orchard trees (25, Vol. II).

Blackbirds were enough of a plague in 1711 to cause the Hartford authorities, (14, Vol. VI), to require every rateable person to kill one dozen blackbirds in the four months beginning with March or else to pay a fine of one shilling. Those who kill more than a dozen may receive a penny apiece.

Wheat had been seriously affected by "blast" which came to be rightly attributed to the presence of barberry bushes. In the Colonial Records for 1726, page 10, it is recorded "Whereas the abounding of barberry bushes is thought to be very hurtful, it being by plentyful experience found that where they are in large quantities they do occasion or at least increase, the blast on all sorts of English grain," the inhabitants of each town are empowered to agree on the utter destruction of such bushes within the town and the time and manner of their destruction.

A fine of ten shillings is imposed on any one who opposes the destruction, to be paid for every month he opposes until he gives free consent. Provided that if the bushes are depended on for a fence, the town shall make just satisfaction.

In 1784 the Laws of the State of Connecticut provide that any one, with the advice and consent of the civil authorities and selectmen of the town may, during March, April, October and November, enter any lands where barberry bushes are growing and dig up and destroy them without being liable to any action, suit or damage. In 1796 the town of New Haven, (16), granted $200 for the

purpose of destroying the barberry bushes within its limits and they were "principally destroyed." "The method adopted to destroy them was to eradicate them."

This was nearly one hundred and fifty years before botanical studies proved a direct connection between the blast of wheat and barberry bushes. The farmer knew nothing of *Puccinia graminis* and "heteroecious rusts" which must spend a part of their life cycle on one plant and a part on a different one. But they adopted a plan which was effective and which the farmers of the middle west are now carrying out at a very considerable expense.

No extended discussion of economic history is here in place, but because farm produce had largely to serve the purpose of money in the exchange of service, a brief notice of financial conditions is proper.

The amount of money in the Colony had been relatively very small ever since its settlement. The need for it had also been quite limited.

As we have seen the dwellers in Connecticut for a century and a half had been engaged in settling and subduing a wilderness, producing food and clothing for their own families and having very limited intercourse or trade with the world outside.[13] Barter took the place of a common medium of exchange. But this scarcity of money became an acute embarrassment when intercourse between communities and foreign trade developed. The close of the war of independence (72), found finances in almost hopeless confusion and there was little improvement before the end of the century. All coins, excepting coppers, were foreign, many badly worn or mutilated. The Spanish

[13] A farmer writes (19, Aug, 18, 1788), "At this time my farm gave me and my whole family a good living on the produce of it and left me, one year with another one hundred and fifty silver dollars; for I never spent more than ten dollars a year, which was for salt, nails and the like. Nothing to wear, eat or drink was purchased, as my farm provided all."

"milled dollar" or "piece of eight" was most common, obtained in the West India trade and after the war this and its subdivisions were the recognized unit of account, equivalent to the dollar. The other most common coins were the French guineas and pistoles, Portuguese moidores and "Johannes or "Joes" [14] and Spanish doubloons and pistoles.

The supply of fractional currency was inadequate and silver pieces were often cut in halves or quarters. The coins of Great Britain were in very limited circulation. In 1785 Congress made the silver dollar the currency basis of a decimal system. The equivalent of the dollar in New England was six shillings but was different in different states. Large amounts of paper, "Continental" money entered circulation during the war and succeeding years, the value of which went from bad to worse.

In 1780 one dollar in silver was the equivalent of 65 dollars in paper money which became "not worth a continental" when Congress refused to accept its own paper money in payment of postage.

In November 1777, (15), Congress recommended that commissioners be appointed in the several states, New Hampshire, Massachusetts Bay, Connecticut, New York, New Jersey, Pennsylvania and Delaware to meet in New Haven, to ascertain and regulate the price of labor, manufactures, internal produce and commodities, imported and to recommend legislatures to enact suitable laws in accordance with their recommendations. There is a considerable list of these recommended prices in lawful money, six shillings to the dollar. (The "dollar" was the equivalent of a "piece of eight").[15] Among them are:

[14] A gold coin, worth about nine dollars coined by John (Johannes) a king of Portugal.

[15] A suggested explanation of the dollar sign, $, is the use of the numeral 8 with two vertical lines to give it a monetary significance.

Wheat, peas, beans, per bushel	$ 1.61
Rye or rye meal	1.08
Indian corn or meal	.75
Oats	.50
Butter, (firkin or cask) per pound	.20.7—.22
Neat leather shoes	1.99
Best American steel, per ton	66.40

All through the history of the Colony[16] and especially towards the latter part of the eighteenth century we find efforts made to regulate the price both of labor and commodities and to fix the price at which commodities could be used for the payment of a part of the state or town taxes. Sheldon cites, (57), "colony pay" at which grain and other articles would be received for colony taxes, "town prices" at which the same things would be received for town taxes or for exchanges, "provision pay" was grain or other food.

Thus, for paying town debts the value of wheat was fixed at 6 shillings the bushel in 1722, 12 shillings in 1740, 16 shillings in 1742, and 17 in 1746, "old tenor." Values for other cereals are also given.

The wages of laborers in Goshen (29), were fixed at town meeting at 5 shillings a day, from Oct. 1 to the last day of February and at 6 shillings a day for the rest of the year. How this regulation was received, whether it met with objection or was disregarded does not appear. The mention of penalties is not prominent and one imagines that the law was a convenience to facilitate barter rather than a stern restriction to prevent profiteering. But in a friendly neighborhood where the struggle for wealth was

The shilling would then be 12½ cents, one-eighth of the dollar or the piece of eight.

[16] As early as 1641 (65), the General Court regulated by statue the scale of prices for different kinds ol labor, hours of day labor, etc.

not pressing, because hardly obtainable, some standard for exchanging provisions which did not involve money must have been a great convenience.

If we agree to call a bushel of wheat this year $1.61 and of corn 80 cents, we manage to get one or the other without dispute, though the dollar itself is far from us.[17] The Mexican, whose offer to lend his mule to a stranger was thankfully accepted, replied "Oh, sir, I have no mule but I beg you to receive the compliment." In like manner the farmer might say to his shoemaker, "I have no dollar to pay for your work but I beg you to accept a bushel and a peck of corn with my compliments."

The general progress of agriculture and its condition at various times in this country may be indicated by the following extracts from the reports made by the Colonial government to the English Committee on Trade and Foreign Plantations. These, or most of them are found in manuscript copies of Foreign Correspondence with the British Government 1668-1748, in State Library, pgs, 126, 145, 149, 165.

"The number of our inhabitants is about 4,000. (!) A little pitch and turpentine and tar are sent to Great Britain. Trade is principally with Boston and the West Indies,[18] consisting in what is chiefly produced by tillage of the land. Most people weave their cloth in their own families. Horses and lumber are sent to the West Indies in exchange for sugar, salt, molasses and rum."

"Coarse cloths and coarse linens are made amongst us of our own wool and flax without which our people must

[17] A shoemaker's ledger from 1770 to 1784 (34), shows that he was paid, for making shoes, in walnuts, butter, sugar, salt, milk, wheat, rye, wool, meats, cider and rum.

[18] At this time only 42 vessels were owned in the colony with a tonnage of 1,225, a very small gain over the year 1680.

go naked or ragged ye greater part of the time. We tan our own leather and make most of our own shoes."

In 1708, "The trade of this Colony is principally what is produced by their tillage of the land. The manufacturers in this Colony are but few. There is but one clothier in the Colony so that our people are necessitated to weave the cloth that they can make in their own families without any thing more than fulling of it, (for the most part), after it comes out of the loom. All we make is not enough to serve the occasions of the poorer sort."

In 1728, "The trade of the Colony is but small. Horses and lumber are exported from home to the West Indies for which we . . . in exchange sugar, salt, molasses and rum. What provisions we can spare and some small yearly . . . of tar and turpentine are sent to Boston and New York and Rhode Island for which we . . . European goods."

The last report to the Committee, made just before the Revolution, (Appendix to Public Records, 1772 to 1775) names the same agricultural products as were common about a hundred years before, with the addition of flax. The staple commodities were pork, beef, pot and pearl ashes.

The principal trade was with the West Indies with an occasional cargo of flax seed to Ireland, to England with lumber and potashes and a few to Gibralter and Barbary with flour, lumber and New England rum.

The value of the exported produce and commodities may be 200,000 pounds. Manufacture of linens and woolens was done in the family, for the use of the poorer sort, laborers and servants. Iron, mostly bog iron, was manufactured to some extent "but hitherto not a supply for our inhabitants."

In the eighteenth century three Connecticut men appear prominent for service in promoting and improving agriculture. There were no doubt others who were also leaders, but these three have left permanent records of their services. Rev. Ezra Stiles, D. D., LL. D., was the President of Yale College, from 1777 to 1795. He has left a record of his studies in the growing of silk worms, diligently carried for two years or more. He was the chief agent in planting mulberry trees throughout the State, which provides food for the silk worms, and he showed great interest and helpfulness in all agricultural matters.

Rev. Jared Eliot of Killingworth, a grandson of John Eliot, the apostle to the Indians, a graduate of Yale, was a clergyman of Killingworth, most acceptable in this calling and it is recorded, (16), that for more than forty years he never failed of preaching at home or abroad a part of every Sabbath. He was also a physician, very extensively employed in the neighboring places "and such was his reputation that he was sometimes called out of the Colony." "Much of his practice was performed gratuitously and in charities he abounded." Connected with his knowledge of medicine was his acquaintance with the botany of the region. He was withal a successful farmer and "acquired a large landed estate which laid the foundation for the wealth of a numerous family." But aside from his example as a progressive and successful farmer, his chief service was in his writings, the most interesting of which is a series of Essays upon Field Husbandry in New England as it is or may be Ordered. This, it is believed, was the first practical agricultural treatise written in this country.

The first of these essays appeared in 1748 and in sub-

sequent years five others, with an index concluding the series in 1761.

He discusses the handling of tilled land, drainage, the grasses which he finds most useful, the production of silk, the use of creek mud as a fertilizer, etc. He introduced and urged the growing of clover which made its way into general farming very slowly (25, Vol. II). He was an experimenter and reported the results of his work for the benefit of the public. Prof. Eli Ives, in an address before the New Haven Horticultural Society in 1837 states that Jared Eliot introduced chicory into this State and that he was the first native citizen of this country to be elected a member of the Royal Society of London. He also appears to have been the first to introduce an agricultural machine, a seed and fertilizer drill. Starting with Jethro Tull's wheat drill which he found very intricate and expensive, "But knew not how to mend it, therefore applied myself to the Reverend Mr. Clapp, President of Yale College and desired him for the regard which he had to the public and to me, that he would apply his mathematical learning and mechanical genius, in that affair, which he did to such good purpose that this new modelled drill can be made with a fourth part of what Mr. Tull's will cost."

Next Eliot wanted a dung drill for which there was no model or precedent available. But Benonai Hylliard of Killingworth, a wheelwright, devised one which was combined with the seed drill so that they became one tool and could distribute 80 bushels of dung per acre, along with the seed. Eliot adds that Tull writes, "Two shillings in horse plowing would do more than forty shillings in dung."

To this Eliot remarks, "I should be glad, if in our climate one-half of this would prove true."

The perfected drill received an award of fifty pounds offered by the New London Society for the Encouragement of Arts, and there was dispute between the estate of Jared Eliot and Hylliard as to the possession of this award.

Agriculture in the Nineteenth Century

The agriculture of the seventeenth century had been a struggle of each family to produce for itself by its own labor, food, clothing and shelter and to defend itself against the attacks of Indians and the ravages of wild beasts which together threatened the destruction of the settlements. It was truly a struggle for existence.

Agriculture in the eighteenth century had been less menaced in these ways but was interrupted by the war with the mother country, by emigration to western lands and by the political agitation incident to the establishment of a federal union. These were matters of great concern to men who had fled from what they considered political and religious injustice, matters not to be left to the tender mercies of a politician class but to be anxiously and often acrimoniously discussed in their town meetings as well as in the state legislative assembly by men who thought more about the future of the State than of improvements in agriculture.

In general each family formed a closed circle, containing within itself both producers and consumers in about equal proportion.

"The close of the Revolution found the State greatly impoverished. The demands made on the State for provisions for the army," says Gov. Trumbull," were "vastly

beyond her just proportion. Payment in depreciated currency involved financial loss and discontent. Connecticut also bore the expense of defending her own coasts, an expense which the federal government refused to assume" (34).

At the beginning of the nineteenth century nine-tenths of the inhabitants got most of their living from the farm.[19] Even those who had other business or profession, artizans, lawyers, physicians and clergymen, all had farming land and supported themselves partly from its produce.

This is illustrated by a statement that the doctors in Canterbury practiced medicine "when they had nothing more important to do," and the inventory of a physician in that region, besides his stock of drugs, included a pair of oxen, thirteen cows, thirty-five head of young cattle and sheep, swine, hay, farming tools, etc. It was usual to set aside a tract of land for the support of the minister and he also was often dependent, in part, for support, on his own work in farming.

It was only a very inconsiderable portion of the population which did not clothe and feed itself, mostly by its own labor and on its own land. The sum total of manufactures was not large and manufacturing, particularly of clothing and other textiles, was chiefly done, not in factories but in families and was, up to this time, largely for home or community consumption.

The methods of agriculture made no marked improvement in these two centuries. Bidwell, (8), says "The ignorance and the conservatism of farmers were to some extent hindrances to agricultural progress, cheap land on

[19] In 1810 about one-tenth of the population lived in towns of between five and six thousand, one-quarter in towns of between three and five thousand dwellers (average thirty-seven hundred), and about two-thirds in still smaller communities.

the frontier discouraged cultivation at home; but these circumstances do not, either alone or in combination, furnish a sufficient explanation of the state of the industry which prevailed.

"In the background lay a condition of much more significance because of its determining force upon all the others. I refer to the lack of a market for agricultural products." The author asserts that with a suitable market, neither ignorance of methods, nor cheap land inviting extensive rather than intensive farming would have stood in the way of agricultural progress. But with little or no chance to sell a surplus of corn, butter, cheese, etc., of what use was it for the inland farmers to raise such a surplus? It was time and labor wasted.

Agriculture was waiting for an increase of non-producing population, and facilities for foreign trade which were to come with improved means of transportation and the growth of manufactures and of shipping.

The condition of agriculture at the beginning of this century is set forth by Purcell as follows (54): "American agriculture at the beginning of the nineteenth century was inferior to that of England" (24, Vol. I). "The small free holder with fifty to one hundred and fifty acres could not afford to be progressive. Content with a tolerable crop which covered local demand, he was contented to scratch the top of an exhausted soil with an antiquated plow, sow home grown seed on unharrowed fields and await the harvest. Indian corn, the staple crop, was cultivated as the aborigines had taught the first settlers, fertilized by white fish or sea weed."

"Small apple orchards furnished cider apples for cider brandy," but not exclusively for brandy making. Cider itself was a common, not to say an almost universal drink

in families and some good eating apples were also grown. The housewife also made store of dried apples and apple butter for winter use. In the aggregate, "the production of butter and cheese was large." "Sheep were of a mongrel type producing little wool." "Oxen were used for heavy work on the farm and horses chiefly for driving." "Swine alone were considered up to the standard by foreign observers." "The fodder for livestock was insufficient; the lack of nourishment coupled with imperfect shelter and inattention to the principles of selection in breeding, had caused a general degeneration in practically all kinds of domestic animals."[20]

"In general the system of agriculture was not only extensive but even in many respects predatory: the farmers had little stimulus to get anything beyond a living." "The call for food supply in commercial towns can scarcely be said to have had any influence on the prosperity of the (farming) population or on farming methods in the inland region." Trade and barter were generally practiced in the inland towns, to provide certain luxuries and comforts which the farm could not supply, such as coffee, tea, sugar and—let it be whispered—rum. As to the markets for produce outside the State, there was a limited trade with the City of New York, then of 100,000 inhabitants, the southern states and the West Indies, chiefly from the river and shore towns of Connecticut. In the New York market there was competition with the Dutch settlers on Long Island and the nearby New Jersey and New York farmers. New Haven also shipped in the coasting trade cheese, pork and hams, butter, lard and cereals (8), the only vegetables being small amounts of

[20] The situation is admirably set forth in detail in P. W. Bidwell's Rural Economy in New England at the Beginning of the Nineteenth Century. (8)

beans and potatoes, most being transhipped to the West Indies. Other towns shared in this coastwise trade. The Connecticut River and Long Island Sound furnished the only convenient channels for moving the produce of Connecticut to market. But these means for carrying and trading in the products of the farm were entirely inadequate to serve the inland towns.

The public roads and highways were in wretched condition, being generally in charge of incompetent managers and inefficient workmen who were either impressed by the town or were "working out" their road tax. Cooperation between towns and counties in laying out and building highways was not always easy. In short, there was neither adequate means of transporting farm produce from the inland producers to consumers, nor any great demand for them. Connecticut had been, essentially on a circular one track business. It might have suited a literalist who could quote from the Scripture, "Having therefore food and raiment let us be therewith content."

It may not be amiss to mention two traits which have been commonly ascribed to the Connecticut Yankee and which were developed in these many years of struggle with adverse conditions. The first is a close and sometimes parsimonious economy. Of this Horace Bushnell wrote, "It was also a great point in this homespun mode of life, that it imparted what many speak of only with contempt, a closely girded habit of economy.

Harnessed all together in the producing process, young and old, male and female, from the boy that rode the plow horse to the grandmother knitting under her spectacles, they had no conception of squandering lightly what they had all been at work, thread by thread, and grain by grain to produce" (8). But along with this there was

also of necessity developed a spirit of comradeship and an exercise of mutual helpfulness in all times of need; for they were "members one of another."

Other traits ascribed to the Yankee were ingenuity and resourcefulness. In an unsettled country, without division of labor, with almost no factories, the farmer had to be his own mechanic, machinist and architect.

Inventiveness, which was at first a necessity in making tools and appliances for his own house and farm, fostered by the native mental alertment of the settler and the facilities for general education, instantly applied itself to invention and manufacturing as a separate business when the political troubles of the early nineteenth century stopped trade with the factories of the old world.

But here began a new agriculture.

In a century where the growth of knowledge of the laws of nature and the art of bringing the work of the world into co-operation with them, had been greater than in all the world's previous history, it was inevitable that agriculture, the basic industry of our people, should have made rapid advances in methods; in supplementing hand labor by machinery, reducing the man power required on the farm, facilitating transportation and trade, improving the quality of live stock and the types of cultivated plants and restoring the fertility of soils, temporarily exhausted by the rude agriculture of the previous centuries.

The course of Connecticut farming in this century may be roughly divided into four periods. First, the period of self sufficient economy, at its highest point of development in the early years of the century. Second, the period of transition to commercial agriculture — agriculture as a business — due to the development of manufacturing

and foreign trade which involved a large non-farming population.

This lasted till near the middle of the century. Third, the period in which Connecticut agriculture was greatly depressed by western and later by southern competition. Fourth, the period of abandonment of the less productive lands and the unprofitable crops and more intensive production of the very perishable farm products, fruit, vegetables, milk, etc., for consumption in adjacent cities.

Each of these periods has forced important changes in the kind of farm products raised, a resulting loss of invested capital and in some cases the abandonment of farms and the desolation of rural communities.

These changes also wrought a diversification of farming, caused by differences of soil and climate, (there is enough difference in the length of the growing season between the northern and southern counties to affect the yield of certain crops), opportunities of foreign trade, etc. Thus at nearly the same time, horse and mule breeding for the West India trade, was a paying business in the eastern part of the State, in the northwest cheese making was popular and profitable, while in New Haven and specially in Fairfield Counties more flax and flax seed were grown than in the whole of New England besides.

The history of Connecticut agriculture in this century is the history, not of the development of a single great business like cattle or wheat growing, but of raising various kinds of farm products, beef, dairying, special crops, like flax, tobacco, onions, etc., at times promoted, at other times depressed by wars, financial crises and the development of competition with other places, largely caused by

the growth of transportation facilities and cheap western lands.

In the eighteenth century, as we have noticed, trade had begun, chiefly with the West Indies, but early in the nineteenth century trade and commerce greatly expanded. The north Atlantic states were the food states. The demand for provisions, fresh, salted, pickled or dried, besides livestock and naval stores, was great and trade with the warring countries of Europe, as well as with the West Indies was very profitable — and at times very risky. The United States was the only constantly neutral country with food to sell and ships to carry it and agriculture, shipbuilding and trade greatly prospered for a time. But from about 1807 to 1916 embargos, spoliations, non-intercourse acts and war with Great Britain and all the measures of other countries to impede our manufactures and commerce, depressed farming in one direction and caused a marvellous expansion of manufacturing. Some capital had already been collected by commerce and an intelligent and energetic labor force immediately pushed the business of manufacture when European supplies were cut off and increased the demand for domestic goods which grew in volume and lessened the number of food producers.

But it did not for some time greatly concentrate population in manufacturing centers. In 1840 this State had a population of 310,015. About one-sixth of them were engaged in manufacture (not including farm produce, butter and cheese, cutting lumber, etc.)

Boots and shoes were extensively made, but no shoe factories are listed. The work was let out to be done in families. There are 2,166 "factories" listed, but their size is shown by the fact that the average number of

hands in each of the 284 textile mills was thirty. Eighty-seven different manufactures are listed and every town had a considerable number. With all these factories only 29,000 tons of coal were used, small water powers, wood and perhaps charcoal furnished the rest of the needed power. It is obvious that many of the "manufacturers" were also farmers to the extent of growing more or less of their own food (66).

The factory system of England became established in America in the second quarter of the nineteenth century and the development of manufactures on a very large scale has been since 1880 (9).

While the total population of the State was 2.2 times as large in 1920 as in 1880, the population of eight of our manufacturing towns was about 3.3 as large as it was forty years ago and includes a little over half of the population of the State. In 1880 it included about one-third.

The agencies which helped to make the art of agriculture more intelligent and productive by bringing to its aid the results of farm experience here and elsewhere were the following:

FARMERS ORGANIZATIONS. AGRICULTURAL SOCIETIES. These gatherings drew their members from the isolation of their farm life, secured social intercourse, the exchange of ideas and experience, instruction from agricultural leaders and by frequent shows and fairs promoted a healthy emulation in crop and livestock production.

The agricultural societies were not meant to be just clubs for the exchange of facts and personal farm experience, but included men of all professions who were to receive, adopt and spread the knowledge of the farming progress of all countries. This they did in the earlier

years of the century, but later their chief activity was in providing annual fairs or agricultural shows.

A "Society for Promoting Agriculture in the State of Connecticut" was formed by persons from several towns, at Wallingford, Aug. 12th. 1794 and a constitution was adopted Nov. 11th, 1794. Its members were invited to make experiments in the various departments of agriculture and the constitution of the Society contemplated the free communication of that information. Many experiments were made by the members themselves and their observation was extended to the improvements of their neighbors; the queries which were framed by the Society were distributed to stimulate a spirit of investigation and the report of useful facts to the Society, that they might be preserved for general use. Both oral and written communications to the Society were encouraged and the former committed to writing.

"This Society shall reject all doubtful or suspicious facts in communications made to the Society." The queries issued by the Society cover the whole range of farm practice.

In its Transactions, published in New Haven, in 1802, a considerable number of experiments are recorded, chiefly with fertilizers and amendments and each article is signed by the contributor. This Society was probably the fifth of its kind to be organized in the United States.

Regarding it Prof. Brewer states that it met at various places in New Haven County, but its influence extended over other parts of the State. A new constitution was adopted in 1803. A library was started in 1807. There seems to be some confusion regarding the name of the Society. In 1709 in the call for meetings it is named "The Agricultural Society of the State of Connecticut."

From 1803 to 1818 it was called "The Society for Promoting Agriculture in the State of Connecticut." But when the Society applied for incorporation the General Assembly was unwilling to grant this name, but granted the name of "The Agricultural Society of New Haven."

At first many papers were read on agricultural topics at its meetings which were quite regularly held and in 1813 it was "Resolved that a discourse be delivered before the Society at New Haven on the day following the public Commencement of Yale College, at 11 A. M. annually."

In 1819 apparently it began holding an agricultural and manufacturing show in the county. In 1820 the president of Yale College and the clergy of the county are made honorary members of the Society.

A circular issued in 1840 speaks of a "revival" of the Society and there are no records of meetings between 1822 and 1840. In 1841 the Transactions of this Society and of the New Haven Horticultural Society were printed in a pamphlet of 84 pages. The annual fairs were revived and held for a time in the town which raised the most money for the expenses of the fair. Thus in Waterbury, in 1847, there were exhibited 1,300 head of horned cattle of which 300 came from Watertown, and about 10,000 people attended the fair. In 1848 it was voted to ask the General Assembly for an appropriation for a professorship of agriculture in Yale College and Prof. J. P. Norton was asked to deliver a lecture on agriculture before the Society during the next session of the Legislature and that members of both houses be requested to attend.

The manuscript records of the Society end in 1860.

The Hartford Agricultural Society was founded and incorporated in 1817, suspended in 1831, revived in 1840,

and in that year published a pamphlet of its Proceedings. It held fairs from 1854 to 1857 and perhaps later. The Horticultural Society of New Haven, organized in 1830, incorporated in 1833, was intended to take the place of the Agricultural Society of Connecticut, then moribund, but later invigorated. The Society published reports in pamphlet form with premium lists and occasional papers. The Society still exists. Other agricultural societies were established as follows: Litchfield County, about 1839; Windham, Fairfield and Middlesex Counties in 1840. The latter led a precarious life until 1851 when it became more prosperous. Its reports were published in the Middletown papers. The Tolland County Society was established in 1853 and the New London Society in 1854. The Greenwood Agricultural Society was founded in the northern part of Litchfield County, in 1844. In the same year the Pomological Society of New Haven was established. The Hartford Horticultural Society was organized in 1849. For a time it held weekly exhibits of fruits, flowers and vegetables, from June to October.

But by the middle of the century most of these societies became dead and alive affairs, affected with sleeping sickness (18), only waking at times to make an exhibition, which was a kind of farm outing, reviving again with some vigor, under the management of some exceptionally efficient officer, then dozing again, or splitting up into smaller local groups.

But in 1852 H. A. Dyer prepared a bill which was passed, incorporating The State Agricultural Society and wrote its constitution which was adopted in June of that year. The first annual meeting was held on Jan. 11th, 1854. The aim of the Society is thus explained: "The Society seeks to disseminate a knowledge of agricultural

science among farmers by encouraging the institution of clubs in the several towns where the experience of practical men may be gathered and the theories of scientific men discussed and subjected to experiment by members.

The Society also recommends the use of elementary science books in common schools, the preparation of teachers in normal schools for instruction in these studies and gathering the products of agriculture in this State and bringing men together to enjoy an annual harvest festival." There appears to have been a federation of county agricultural societies, each of which chose a delegate to sit as a member of the executive committee. The first fair was held in New Haven in 1854 at which premiums of $3,500 were offered. Subsequent fairs of this Society were held annually in New Haven and Hartford and one at least in Bridgeport.

From 1854 till 1859 this Society printed a report of its Transactions. It is said that these publications continued till 1867, but I have not been able to find them. Besides some reports of the proceedings and fairs of the other agricultural societies, they contain notable papers on various agricultural subjects. For example, in 1855 Prof. John A. Porter offers a plan for an agricultural school. In 1856 is a paper by T. S. Gold, The Natural Flora of a District Indicates its Natural Capacity. The first of Prof. S. W. Johnson's reports on Commercial Fertilizers was published in the Transactions of 1856, followed by further reports in the two following years. In the report of 1858 he published an Essay on Peat, Muck and Commercial Fertilizers which was the basis of his book on Peat and its Uses, long the standard authority on that subject. In 1856 there is an interesting paper by H. A. Dyer on Tobacco.

Probably one result of the discussions of these agricultural societies was the testing of various old world crops and plants; lucerne, vetches, spelt, rape, poppies, madder, woad, etc., most of which were soon found to be of little or no value in this State. Alfalfa and rape still have consideration and occasional patches of alfalfa still found in headlands and fence corners, are relics of tests made long ago.

Incidentally should be mentioned the small local "Farmers Clubs" which were most numerous in the last quarter of the century and were to the neighborhood what the Agricultural Society was to the county.

The first Farmers Club of which record is found was organized in Middletown about 1842. It was to hold six meetings between October and May. "No question is to be discussed but such as shall immediately relate to agriculture."

Many of these agricultural societies still exist, but the sole purpose of most of them is to hold an agricultural fair each year, offering premiums which are paid in part by a state appropriation.

(At this writing, 1924, thirty-nine fairs have assigned dates for the present year.) The State Agricultural Society is still in existence and holds an annual show, but it has greater influence in popularizing horse racing and the attractions of a midway than in promoting agriculture. Yet in the Fifties this society was very active and became the forerunner of the State Board of Agriculture which was for a long time the single rallying point of farmers.

The Board of Agriculture. This Board was incorporated by the General Assembly at the May session

of 1866. It was made up of the Governor, one person appointed from each County by the agricultural societies which received an annual bounty from the State and four appointed by the Governor with the consent of the Senate. The Board met and organized on August 1st, 1866. The Governor was elected president, E. H. Hyde, vice-president and T. S. Gold, secretary. The Board was to investigate such subjects as it thought proper relating to improvements in agriculture and horticulture, to investigate and regulate returns of Agricultural Societies and make report on them and to inquire into the wants and methods of practical husbandry, encouraging the establishment of farmers clubs, agricultural libraries and reading rooms, and to disseminate useful information in agriculture, by means of lectures and otherwise. The first of its public meetings was held Jan. 8, 9, and 10, 1867, in New Haven.

The Board of Agriculture proved to be the organization which was most needed and most effective in promoting all agricultural interests.

Its annual meetings brought together all the leading experts in agricultural science, the leaders in agricultural practice within the State and large numbers of interested farmers. The latest work of experimenters, the wisest experience of practical farmers, discussion, and opportunity for questioning by anyone in the audience—all these things gave tremendous interest and importance to the meetings and particular value to the reports of them.

The meetings of this Board were also the birthplace of legislation in the interest of agriculture and of agricultural institutions like the Connecticut Agricultural Station, The Storrs Agricultural Station, the Storrs Agricultural School and the Connecticut Agricultural

College. All these projects were discussed in advance in the winter meetings and the opinion of the farming public obtained.

"In no other state," said Prof. Atwater "has so much been done for the application of chemistry to agriculture as has been done in Connecticut through the agency of the Board of Agriculture."

It would carry us too far to recite the subjects treated at these meetings which have been held annually, with possibly one exception, ever since. It is certain that the reports of proceedings in the earlier years are everywhere regarded as the most valuable of all simi'ar reports and have been of the greatest help in the improvement of Connecticut farming. Especial praise is due to the service rendered by T. S. Gold, the secretary of the Board during a long series of years, for his most wise and efficient management of the meetings.

The Board was abolished by resolution of the General Assembly on July 21st, 1870, but in 1871 The State Board of Agriculture was again incorporated by the same body. The new act of incorporation is quite like the old except that wider powers were conferred on the board.

The Board could quarantine animals having infectious diseases, enter premises where such diseases were present or suspected and make necessary regulations to prevent a spread of the disease and to appoint three commissioners on diseases of domestic animals and delegate to them the powers of the Board. The Board elected besides a president, vice-president, secretary and treasurer, a veterinary surgeon, entomologist, botanist and chemist. Thus constituted, the Board continued to be active in providing for discussions of agricultural improvement and for information both from scientific experts and from leaders

in agricultural practice. In 1897 the Assembly reorganized the Board, providing that its eight members should be appointed by the Assembly, one from each county, rather than as before, by the agricultural societies of the State.

Two offshoots of the Board have had a very vigorous and helpful life: On April 10th, 1889, was incorporated the Connecticut Dairymen's Association. A brief report of its meeting in January, 1892, 25 pages, states that this is the eleventh annual meeting.

It then had 45 life members and 43 annual members. It must therefore have been in existence for eight years before its incorporation.

It has yearly held a general meeting of dairymen and has published valuable annual reports. It has also held dairy institutes and farm meetings about the State. In 1900 it had 99 life members and 69 annual members.

The Board of Agriculture had a pomologist and at its annual meetings were many discussions of interest to orchardists; but as fruit growing increased in importance within the State, the growers desired more opportunity for discussion and promotion of their interests.

A convention of fruit growers, called in 1891, organized the Connecticut Pomological Society. This Society, which in 1923 numbered 483 members, has for many years held annual meetings with fruit exhibits which are largely attended, frequent field meetings during the summers and farm institutes in all parts of the State. It has been the chief agency in promoting the interests of fruit growers.

The Cream Hill Agricultural School. The usefulness of technical schools of agriculture was anticipated long before their establishment. A debate in Yale Col-

lege in 1789 is noted on the question: "Whether it would be best to introduce agriculture into colleges as a classical study?"

In 1832 an effort was made to establish The Litchfield Agricultural High School and the corporation of Goshen Academy was asked to turn over the Academy to the promoters of the scheme, but they were refused and the plan failed (29). In 1842 the Connecticut Farmers Gazette announced that Rev. J. B. Noble proposes soon to open an agricultural institute in Bridgeport. No further notice of it has been found.

Three years later, in 1845, The Cream Hill Agricultural School was established at West Cornwall and conducted by Dr. S. L. Gold, for years the principal physician in Goshen, who had recently removed to his farm in West Cornwall, and his son, Theodore S. Gold, (Yale, 1838), who, throughout his long life was an inspiring leader in the promotion of Connecticut agriculture. The prospectus of the school is in part:

"The plan of this institution is to receive a select and limited number of pupils, under the superintendence of well qualified teachers, to be fitted for college, or any of the useful pursuits of life.

"This school embraces two important departments of instruction. First: Thorough attention to the various elementary and scientific branches taught at the best academic institutions. Second: Both scientific and practical instructions in Agriculture and Horticulture, embracing the most approved method of tillage, rearing of stock, cultivation of trees, the laying out of grounds, ornamental gardening, chemical analysis of soils, composts, etc. A portion of each day will be allotted to these subjects, so that the pupil may become a scientific and prac-

tical farmer. The farm, containing 200 acres, with convenient buildings, situated on Cream Hill, surrounded by a picturesque country scenery, furnishes a location unrivalled for healthfulness and freedom from immoral tendencies and peculiarly fitted for such an institution.

"The Housatonic railroad furnishes daily access to New York. The students will become members of the family of the instructors. A parental supervision will at all times be exercised over each individual.

"All will be treated with kindness and every attention rendered, with affectionate regard to health, deportment and morals.

"The institution will be conducted by Samuel L. Gold, Theodore S. Gold and Thomas R. Dutton. There will be two terms in each year; the first commencing the first Wednesday in May, and terminating the first Wednesday in November; the second from the first Wednesday in December to the first Wednesday in April.

"Terms: The pupils will be furnished with tuition, board, fuel, lights, washing, privileges of the library and riding, at $200 a year, one-half to be paid at the beginning of each term.

"West Cornwall, Conn. March 31, 1845."

In all, 272 pupils attended this school from its opening in 1845 until it was closed in 1869 on account of the pressure of other business. It opened with ten pupils. After that the number ranged from twelve to thirty-one, an average of more than twenty-two, probably all that the accommodations would permit.[21]

[21] Prof. George J. Brush was one of the earliest students. He planned to enter a commercial establishment in New York City but here acquired an interest in chemistry and particularly in mineralogy the pursuit of which became his lifework until overshadowed by his administrative work as Director of the Sheffield Scientific School and the Agricultural College of the state.

From the catalogue of 1849 we learn "Each pupil cultivates a garden of about 130 square yards; is instructed in laying out, planting and the application of manures. Small premiums are awarded for the best gardens. Ample opportunity is afforded each to acquire a knowledge of general farming, tending and rearing the various kinds of stock, etc."

There is nothing in the catalogues to show any list of teachers.

Mr. Dutton dropped out soon after the school was established and most, if not all, instruction was given by Dr. Gold and his son.

The Storrs Agricultural School. In January, 1881 Messrs. Augustus and Charles Storrs offered to the State 180 acres of land and various buildings in the town of Mansfield for the purpose of establishing and maintaining an agricultural school. The buildings had been used previously as a home and school for the orphans of soldiers in the Civil War. The offer was accepted and the Storrs School was established.

Its object, as set forth in the act of establishment, was "The education of boys . . . in such branches of scientific knowledge as shall tend to increase their proficiency in the business of agriculture."

A part of their time was to be spent in classroom work and a part in the practical work of the farm. The school continued for twelve years with fair success. During this time its attendance ranged from 40 to 63. In 1893, by act of the Assembly, its purpose was changed and it was renamed The Storrs Agricultural College.

The Agricultural and Mechanical College of Connecticut. In 1840 Justus von Liebig issued his

work on Chemistry in its Relations to Agriculture which started a great agricultural revolution and drew the attention of chemists throughout the world to the problems of plant production.

Between 1840 and 1850 Prof. Silliman at Yale gave instruction in these matters. In 1846 John P. Norton, the son of a Connecticut farmer, after training as a farmer and some years of study at Yale and at Boston and later in Scotland, (where he won a prize of fifty sovereigns, given by the Highland Society of Scotland for the best essay on the oat plant), opened a laboratory at Yale in connection with Silliman "for the purpose of practical instruction in the applications of science to the arts and agriculture."

This was the beginning of the Sheffield Scientific School which first gave the degree of Ph. B. in 1851. Here Prof. Johnson studied and began the analysis of commercial fertilizers and detection of frauds in their sale, and for many years this was the only place connected with any college in America where that means of protecting farmers was systematically followed.

Norton, whose work was cut short by tuberculosis, was succeeded by Prof. John A. Porter.

In the meantime Joseph E. Sheffield made a gift of $50,000 for the endowment of the School and during the rest of his life gave from ten thousand to twenty thousand dollars yearly to its support and made it as one of his children in the final division of his estate. In all he must have given more than a million dollars to its support.

Under the management of Prof. Norton there was given the first course of Yale Agricultural Lectures, which began Feb. 1, 1860, and closed Feb. 25.

The views in which this course originated are given by

Prof. Porter as follows: The importance of new agencies for the diffusion of agricultural knowledge is emphasized.

"Shall we wait for the establishment by government of great agricultural institutions, similar to those in Europe? Such institutions are the most obvious and essential wants of our times, but a public and general opinion of their utility and necessity must be created before either our state or national governments will seriously consider their establishment."

Porter proposes "the enlistment of practical men, who are not professional teachers, in the work of instruction and their combination in such numbers, that a small contribution of time and labor from each shall make a sufficient aggregate to meet the object in view."

The experiment was made under the auspices of the Yale Scientific School. At this course of lectures about 350 students were registered and some 500 in attendance; 172 from Connecticut, 23 from Massachusetts, 35 from New York and a smaller number from 13 other states.

Three lectures were given daily, morning, afternoon and evening. The subjects and lectures were:

Agricultural Chemistry	Prof. S. W. Johnson
Entomology	Dr. Asa Fitch of New York
Vegetable Physiology	Daniel C. Eaton
Vegetable Pathology	Chauncey E. Goodrich
Pear Culture	Marshall P. Wilder
Grapes	Dr. C. W. Grant
Berries	R. G. Pardee
Fruit Trees	P. Barry
Fruits	Lewis F. Allen
Arboriculture	Geo. B. Emerson
The Honey Bee	Mr. Quimby
Drainage	Henry F. French
Grasses	John S. Gould
Agricultural Associations	Mason C. Weld

Cereals	Joseph Harris
Root Crops	T. S. Gold
Tobacco and Hops	W. H. Brewer
Sandy Soils	Levi Bartlett
English Agriculture	L. H. Tucker
Profits of American Farming	Josiah Quincy, Jr.
Cattle	Cassius M. Clay
Stock Breeding in the United States	Lewis F. Allen
The Dairy	Charles L. Flint
Horses	Sanford Howard
Breeding and Training Horses	Dr. D. F. Gulliver
Sheep	T. S. Gold

The course proved to be very popular and stimulated the desire for regular courses of agricultural instruction. "Mr. Barry whitling at his pear tree before the audience is worth a whole treatise on grafting and pruning. Mr. Gold's discourse on sheep, interspersed with the bleating of his Cotswolds and punctuated with the black noses of his Southdowns, is worth a volume on mutton and wool."[22]

This Institute was not continued. In the next year the outbreak of the Civil War made it seem unwise at that time and the establishment of the Agricultural College later made it less needed. But there is much evidence that greatly increased interest in scientific agriculture immediately followed. "In concluding, Mason Weld strongly advocated the establishment at once of an agricultural farm in connection with a thoroughly furnished laboratory, referring to the debt the world owes Lawes and Gilbert for their experiments at Rothamstead and to the weighty results developed by the investigations in France and Germany which latter country has now in operation more than forty experiment stations under the

[22] Brief abstracts of these lectures are given in the New England Homestead for the year 1860.

management of competent men of science in connection with practical farmers."

Two years later the Morrill Act was passed by Congress which provided for the establishment of an Agricultural College in every state.

By this act a grant of public land was made to each state for "the endowment, support and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts in such manner as the legislatures of the states may respectively prescribe in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

The yearly grant to Connecticut yielded an income of only six or seven thousand dollars — a rather scanty sum for the establishment of an institution which should meet the requirements of the act.

Yale College was the only institution which was at all capable of using the grant. It was already equipped for such work and was giving instruction in all the branches of study required under the act except in military tactics. The state having accepted the grant, in 1863 gave the income to the Yale corporation to be devoted to the support of the Sheffield Scientific School for the maintenance of such instruction as shall carry out the intent of Congress.

The School was to furnish gratuitous tuition to such a number of pupils that their tuition, charged at the usual rate, would equal one-half of the income of the fund. The award of these scholarships was made by a committee, whose appointment was provided in the act.

The State made a perpetual contract with Yale College and established it as the Agricultural and Mechanical College of the State, but contributed nothing more to its support. The government fund was, however, supplemented by generous gifts from Joseph E. Sheffield as has been noted on a previous page. In 1890 Congress passed an act for the more complete endowment of the Agricultural Colleges by which they eventually received an additional sum of $25,000 annually. At this time there were eighty students in the Sheffield School on the agricultural scholarships.

As soon as this appropriation was made, various colleges of agriculture and the mechanic arts were bitterly attacked on the ground that they were not fulfilling the object of their existence and were maintaining colleges of too high grade and unsuitable requirements for the sons of farmers. As a consequence of this movement the General Assembly in 1893 transferred the government fund to the Storrs Agricultural School in the town of Mansfield, at the same time changing its name to the Storrs Agricultural College.

A commission appointed to decide on the nature of the contract between the State and the Sheffield School awarded the latter $154,000 damages on account of the violation of the perpetual contract by the State. The Storrs Agricultural College had at this time an enrollment of about one hundred students and its courses were officially opened to women. In 1889 the name of the institution was changed to the Connecticut Agricultural College.

The College now has an attendance in all departments of 484. Its activities fall into three divisions; the Resi-

dent Instruction, the Storrs Agricultural Station and the Extension Service which are noticed later.

The Resident Instruction offers:

1. A four year course in Agriculture leading to the bachelor's degree. Graduates of high schools, accredited by the State Board of Education are entitled to enter this course.

2. A four year course in Home Economics, for young women, leading to the bachelor's degree. Open to graduates of high schools as above.

3. A two year course in Agriculture, divided into four ten-week terms. Open to those who have had a common school education. Those completing the four terms' work are given a diploma.

4. A summer school in Home Economics for those who desire teacher training in that subject.

5. Short course in Agriculture is given to men and women of the State who can be away from home duties for a short time only.

Agricultural Extension Work — County Farm Bureaus

On May 8, 1914 a national system of co-operative extension work in agriculture and home economics was provided by the so-called Smith-Lever bill. By it Congress appropriated $480,000, providing an annual increase for eight years until the total sum annually appropriated reached $4,580,000. Congress has since appropriated an additional $1,300,000 for the same purpose as the Smith-Lever fund and a further appropriation of about $1,300,000 for co-operative demonstration work.

In order to secure Federal Smith-Lever funds, the

several states must appropriate an equal amount for the support of extension work.

These funds are divided between the states on a basis of their rural population. Under these several acts Connecticut receives $68,950.09 from Federal funds which is supplemented by appropriations from the State amounting at this date to $75,000 annually.

The Extension Service is, therefore, part of a national system of agricultural education established by Federal laws. It is a division of the Agricultural College which is carrying information and instruction in improved methods of farming and home making to the people of the State, through demonstrations, meetings, letters, news stories, campaigns, field trips and farm and home visits. Further than this it is the work of the extension service to interest farmers and home makers in putting these improved methods into practice. It is concerned as much with assisting in solving the problems of marketing as it is with solving the problems of production.

The extension work is carried on by a staff of men and women. Some of these are specialists in the various branches of agriculture and home making, such as dairying, fruit growing, poultry raising, nutrition, clothing, etc., who work throughout the State and have headquarters at Storrs. The other extension workers are county representatives of the Extension Service and are known as County Agents, doing work in agriculture with adults; Home Demonstration Agents, working with women on home problems; and County Club Agents, the latter carrying work with boys and girls, commonly known as club work.

Practically all the work is carried out in conjunction with the county workers. The Extension service reaches

the entire family; men, women, boys and girls. The specialist studies the industry which he represents, in order to learn its problems and recommends the improvements which should be encouraged and the methods which should be used in extension teaching. Co-operating with the Extension Service are the County Farm Bureaus in each county, supported by membership fees, voluntary contributions and when these amount to $1,000, by grants from the college and State. In 1921 seven Farm Bureaus formed a state federation and through it joined the American Farm Bureau Federation, a national organization, maintaining a representative in Washington and interesting itself in legislative questions which affect the farming interests.

The Connecticut Agricultural Experiment Station. The object in establishing this station was to apply the methods of scientific research in solving those problems of the farm which needed the time, equipment and technical knowledge which the farmer himself could not supply.

Connecticut was the first State to establish such a station after many years of effort to convince the public of the need.

The demonstration which Connecticut made of its value quickly induced other states to create similar stations and now they are found in every state, territory and insular possession of the United States.

A brief notice of the development of the idea for twenty years from the early fifties is interesting. In 1853 and the following years, articles by Prof. S. W. Johnson of the Sheffield Scientific School, published in the Country Gentleman, discussed the contributions of science to agri-

culture, the feeding of farm animals, food for plants, superphosphate of lime, etc., calling attention to the applications of science to agriculture and perhaps for the first time in this country, to the quality of commercial fertilizers. Such fertilizers were then, for the first time coming into common use, extravagant claims for their virtues were often made and no knowledge of their composition given; there was danger of too much faith in their virtues and too little knowledge of their proper use. In 1856 Johnson's exposures of fraud in fertilizers led to his appointment as chemist of the Connecticut Agricultural Society and the continuance of his work on that subject.

A lecture on "The Relations which Exist between Science and Agriculture," delivered in Albany, in 1856 and published in the Transactions of the New York State Agricultural Society, excited wide interest and discussion. There followed almost twenty years of preaching and teaching by Johnson on the need of applying to the art of agriculture the teachings of natural science. His laboratory work as chemist of the State Board of Agriculture and the publication of its results in the annual reports stirred the desire of farmers to enlist the aid of research in the every day work of the farm.

Important in this educational work were his two books, How Crops Grow. A Treatise on the Chemical Composition, Structure and Life of the Plant, for all Students of Agriculture; published in 1868, and How Crops Feed, A Treatise on the Atmosphere and the Soil as Related to the Nutrition of Agricultural Plants, published in 1870. His object, as stated by himself, was "to digest the cumbrous mass of evidence in which the truths of vegetable nutrition lie buried out of the reach of the ordinary in-

quirer and to set them forth in proper order and in plain dress for their legitimate and sober uses."

At the instance of von Liebig the book was translated into German by his son. It was reprinted in England, translated into Italian, Russian, Swedish and Japanese for use as a textbook in those countries.

Two Connecticut men, Jared Eliot in the eighteenth and S. W. Johnson in the nineteenth century wrote books on scientific agriculture, which probably had the widest influence on farming in America of any during this period.

In 1873 Prof. W. O. Atwater of Wesleyan University, a former pupil and assistant of Johnson's, joined in urging the establishment in the State of an Agricultural Experiment Station and in their addresses before the Board of Agriculture and frequent gatherings of farmers through the State emphasized the advantage and need of applying to the art of farming the teachings of natural science and the wisdom of providing an agency whereby the problems of the farm, which the farmer had neither the time, the facilities, or the expert knowledge to solve for himself, could be studied and possibly solved by experts in an institution specially fitted for this purpose.

In 1874 the Board of Agriculture, at the recommendation of a committee through its chairman, Prof. Johnson appointed a permanent committee to urge on farmers and the Legislature the immediate establishment of an agricultural station. Later this committee reported that a bill for this purpose had been introduced into the General Assembly, held by the committee of the Assembly till near the close of the session and then reported, recommending that it be laid over to the next session.

Again in the Assembly of 1875 the attempt was made unsuccessfully.

But Mr. Orange Judd, an agricultural editor and a trustee of Wesleyan University, urged the formation of an association to provide money for an agricultural station by private subscription, a plan which was contrary to the wishes of the committee of the Board of Agriculture. He however, secured the passage of the following resolution in the spring of 1875, thus establishing in Connecticut the first Agricultural Experiment Station in America.

To Promote Agricultural Interests

Whereas, The trustees of the university at Middletown tender the free use of laboratories and other facilities for establishing and carrying on an experiment station for the general benefit and improvement of agriculture and kindred interests of the State of Connecticut, be it

Resolved by this Assembly, That the sum of seven hundred dollars per quarter for two years, is hereby appropriated to the University located at Middletown, Middlesex County, to be used in employing competent scientific men to carry on the work appropriate to an agricultural station.

In addition to this appropriation Mr. Judd subscribed one thousand dollars. A very full and admirable account of the whole movement is given in "From the Letter Files of S. W. Johnson," edited by his daughter, Elizabeth A. Osborne.

This station was under the exclusive control of the trustees of Wesleyan University and an impression,

founded upon Mr. Judd's utterances and personal attitude was widespread that the purpose of this station was for the analysis of commercial fertilizers alone. Such however, was not at all the position of Prof. Atwater, who was chosen as its director. In his first report he says: "It has been felt from the first that more abstract scientific investigation would afford not only the proper, but also the most widely and permanently useful work of an agricultural station. Such an institution will be worthy of the name in proportion as it carries on accurate and thorough investigation and experiment in agricultural science."

But to prove to the farming public the present need of an agricultural station and thus to secure for it a firmer and more liberal basis, stress was first laid on the situation of the fertilizer trade — a continuation of Johnson's work — in which there was "bitter need" of a better condition. In the two following years a large part of the station time was devoted to the examination of fertilizers. Some examinations of dairy feed were also made, the testing of agricultural seeds, effects of nitrogenous fertilizers on the growth of corn, a study of the fertilizer needs of the soil of the Wallingford plains, etc.

A prominent feature of the station work was co-operative experiments with fertilizers on lands in different parts of the State and later, under Prof. Atwater's directions, in several other States, the results of which were printed in the reports of the State Board of Agriculture, from 1877 to 1881. Thus a new agency for the advance of agriculture was founded and the example was speedily followed by some other States.

Five, at least of Prof. Atwater's assistants in this work soon became workers and leaders in other places; W. Bal-

lentine, Professor of Agriculture in the Maine Agricultural College; E. H. Jenkins, chemist and later director of the Connecticut station; W. H. Jordan, director of the Maine and then for many years director of the New York, (Geneva) station; A. T. Neale, director of the New Jersey and later of the Delaware station and C. D. Woods, director of the Maine station.

Before the appropriation for the station had expired the General Assembly passed "An Act Establishing the Connecticut Agricultural Experiment Station," "for the purpose of promoting agriculture by scientific investigation and experiment," and granted $5,000 annually to its support. In its organization this station differs from all others. Besides having no organic connection with any agricultural College it is an independent unit having most of the rights of a corporation, with power to sue and be sued, to receive gifts and to hold property. It is managed by a Board of Control, consisting of the Governor, two appointed by the Governor and one each by the State Board of Agriculture, the State Agricultural Society, Wesleyan University and the Sheffield Scientific School. The director is *ex officio* a member. Prof. Johnson was chosen director and the station was placed at New Haven. As it was not possible to secure permanent quarters from the fund appropriated, the Sheffield Scientific School gave the free use of laboratory and office room until 1882 when the State provided land and buildings which the station has occupied ever since. In 1887 the first Federal aid was given to the stations of the United States by the Hatch Act which ultimately provided $15,000 to each state to be by the state paid to such institution as it might designate, the "object and duty of the station" being to conduct original researches or verify experiments on the

physiology of animals and plants. The General Assembly gave one-half of this fund to the Connecticut Station and half to the newly established Storrs Agricultural Station to be noticed later.

In 1896, by the Adams Act of Congress, $15,000 additional was given to each state and this sum was likewise equally divided between the two Connecticut stations.

This appropriation was to be used only for pure research work, a restriction which has greatly helped the more fundamental work of all the stations. The appropriations by the State to the Connecticut station gradually increased as the scope of its work and the demands made upon it have grown. A very brief notice of some of its labors should here be given to indicate the scope and nature of it.

It taught and proved by field trials the value of spraying for the protection of field crops and orchards from fungi and insects.

It has studied the life history of each new insect and fungus pest as it has appeared and the best methods of fighting it; the San Jose scale, the gypsy moth, the pine blister rust, the elm leaf beetle, etc.

It has directed the work of mosquito elimination and accomplished much with the insufficient means at its disposal.

By its inspection and reports it has exposed the frauds in food and fertilizers and drove most of them out of the State before the Federal Government undertook any of that work.

As a part of that work it has examined all the special foods made and recommended for diabetic patients and the reports on them are the standard reference for specialists in the treatment of this disease.

The long continued and fruitful researches of Dr. Osborne have identified and showed the ultimate and structural composition and properties of the principal vegetable proteins.

An inquiry into their relative nutritive value has led to extensive studies in nutrition, has perfected a new and most fruitful method of experiment in this field, has led to the discovery of vitamines and studies of their function and to medical studies on the cause of rickets, infertility, etc.

The study of plant breeding here has shown the futility of certain recommended methods of inbreeding and selection and by methods first adopted here has produced new and improved strains of corn and tobacco and has demonstrated methods of developing superior strains of field crops which have secured general recognition.

It substituted for the very unfair method of payment of cream by the space, the Babcock method of determining and paying for butter fat only, by adapting it for cream gathering creameries and proving its value.

It made, at the request of dairymen, a comparison of economy between the gravity and the separator systems of raising cream for butter making creameries.

It introduced into the State the successful growing of shade tobacco and the method of fermentation in bulk and by its very elaborate field tests with fertilizers has greatly advanced the tobacco growing industry in the State.

The station established an experimental forest for the study of forest problems, aided in the planting of private and corporation forests, besides giving advice by addresses and field demonstrations in the management of the farmer's wood lot.

These illustrations, by no means a summary, give some idea of the range of the station's work and show how it has gradually become a public service agency. While designed solely for the benefit of agriculture and while its main effort is directed to that end, circumstances have drawn it in several directions into the service of the whole community.

The station has also from its staff, furnished teachers and research men to other states and institutions. Some of them are:

H. P. Armsby, Professor of Agricultural Chemistry in the University of Wisconsin, Director of the Pennsylvania Station and later Director of the Pennsylvania Bureau of Animal Nutrition.

E. M. East, Professor of Genetics in Harvard University.

W. Mulford, Professor of Forestry, University of California.

S. W. Spring, Professor of Forestry, Cornell University.

R. Thaxter, Professor of Cryptogamic Botany, Harvard University.

H. L. Wells, Professor of Analytical Chemistry, Yale University.

E. H. Farrington, Professor of Dairy Husbandry, Wisconsin Agricultural College.

The Storrs Agricultural Experiment Station. In accepting the provisions of the Federal Hatch Act the General Assembly provided that "the farm attached to the Storrs Agricultural School may be used as an experimental farm for the purposes specified" in the Federal act and also provided that one-half of the Federal ap-

Connecticut Agricultural College, Storrs.

propriation which came to the State should be used by the trustees of the school under the provisions of the act.

Prof. W. O. Atwater was chosen director and during the eighteen years of his service, the field and farm work of the station was done at the Storrs Agricultural School and the more purely scientific investigations were carried on in the laboratories of Wesleyan University. In 1903 the station was reorganized and its office was removed to Storrs where a small building was erected for its use. Prof. Atwater resigned his office and Prof. L. A. Clinton became his successor.

Perhaps the most striking work of this station up to this time was that of Atwater and Woods which proved the assimilation of free nitrogen by leguminous crops. It is believed that this work, done in 1881 and 1882 supplied, by convincing evidence, the first proof of this function of the legumes. It was reported briefly at the meeting of the American Association for the Advancement of Science in 1881 and at the meetings of the American and British Associations in 1882, and in detail in the American Chemical Journal in 1885. Before the latter date the more elaborate work of European investigators on the same subject was published in scientific journals.

The studies on the composition and value of foods for human populations on which Atwater was engaged in 1877, the introduction of the bomb calorimeter about 1890, of a respiration calorimeter in 1896, studies of dietaries with determination of energy values, digestion experiments with animals, (1896), mark the beginning in this country of the studies of foods and the food requirements of populations which now fill a large place in the public regard and found a very special value in the world war. Much of this work, reported in the publications of

the Storrs station was done with funds contributed by various outside institutions and individuals. It was not until 1895 that the State appropriated $1,800 yearly for studies of food economy and the bacteria of milk.

The studies of bacteria in relation to dairy practice, began at the station in 1888 by Dr. H. W. Conn and carried on by him and his assistants into the next century, and the introduction of the covered milk pail have been of great educational value to the dairymen and the public and have laid the foundation of the improvement in the sanitary quality of milk produced and sold in this State.

The nutrition studies of the station were discontinued with the removal to Storrs, but the bacterial studies on dairy products were continued.

The field tests of fertilizers in all parts of the State, begun in 1875 were continued until into the next century.

Of importance was also an extensive study of the composition and fertilizer value of the roots and stubble of crops.

The work in poultry, intensively carried on soon after 1900, has determined the nature and cause of bacillary diarrhoea in poultry and shown the effective means for combating it.

The use of pigmentation and other criteria for selecting laying hens has resulted in extensive rejection of unprofitable birds and consequent reduction of the cost of egg production.

The studies of the factors affecting artificial incubation, of the egg production of different breeds, and of the means of controlling parasites of poultry, have all contributed much to the profit of poultry raising.

The studies of infectious abortion, still in progress,

have already thrown much light on this obscure and very destructive disease.

A comparative test of the yield of the chief varieties of corn grown in the State, made in co-operation with the Connecticut station, and continued for nine years has indicated which varieties are on the average the most productive and which are best adapted to the different sections of the State.

This statement is made merely to give an impression but no complete statement of the range of the station's work.

Among those who have been on the station staff and have since served important agricultural interests may be mentioned, W. A. Stocking, Jr., now professor of dairy bacteriology in Cornell University; Dr. Charles Thom, for years assigned to the station as mycologist by the U. S. Department of Agriculture, who was later chief mycologist of that Department; Dr. H. W. Conn, bacteriologist, a professor at Wesleyan University, chief of the State Board of Health laboratory and a leading dairy bacteriologist; C. L. Beach, formerly professor of dairy husbandry at the station, then at the University of Vermont and now president of the Connecticut Agricultural College.

The Grange of the Patrons of Husbandry is an agency which has helped to increase agricultural knowledge in less formal ways than those already cited as well as to promote social intercourse among farmers.

The National Grange of the Patrons of Husbandry was organized Dec. 4, 1867. The founders "looked for advantages to come to the farmers through social and intellectual intercourse, not through political action."

The first local grange was organized in Washington,

D. C., its members being largely government clerks and employees. It was a weak organization until 1871 but the panic of 1873 which fell on farmers with great severity, greatly increased the grange activity and led to the wild "granger" legislation at the west. In that year granges were formed in all but four states, of which Connecticut was one. The organization was at its maximum in 1875 when the membership was probably over one million, but interest declined till in 1880 there were only 4,000 active.

The State grange in Connecticut was organized, April 15, 1875 but was not successful till about 1885 when a new State grange was organized at South Glastonbury. In that year there were sixteen granges in the State. But the order grew rapidly. In 1892 there were eight Pomona granges, 146 subordinate granges with 10,000 members. From about that time the numbers decreased. Of 155 granges organized in Connecticut since the beginning twenty per cent have died.

The grange in Connecticut has never been very successful as a co-operative agency in marketing, nor has it assumed political activity as a distinct party element. It has been of very considerable value, however, in the way contemplated by the founders noted above. It has promoted social intercourse, mental improvement and exercise in public speaking and writing.

It has drawn many from the isolation of their farms into intercourse with a wider social circle, before the days of improved roads, automobiles and by them the possibility of sharing in the attractions of the city, lessened the popularity and the need of the grange.

The Development of Agricultural Tools

"The nineteenth century witnessed greater improvements in agricultural methods and machinery than any —if not all—the centuries that had gone before." At its beginning all agricultural tools were of the rudest kind, designed almost wholly for hand labor and either made on the farm with the aid of the blacksmith or of some local carpenter. No two were exactly alike.

Thus up to 1790 wheat was sown by hand, cut with a sickle, thrashed and winnowed by hand (66). The cradle scythe was in common use before the beginning of the century and Brewer states that between the time of the declaration of independence and the introduction of the cast iron plow, some fifty years later, the most important improvements in agricultural machinery were the American cradle and the fanning mill for cleaning grain and other seeds.

The plow was a very clumsy affair, with a mould board hewn from wood, protected from wear by old scraps of sheet iron or tin nailed to it.

The share was generally of iron with a hardened point. The beam was a straight stick with upright handles cut from branches of trees.

A powerful man was needed to hold it and twice the draft required for a modern plow. Ex-president Jefferson first laid down the mathematical principles by which mould boards could be made by anyone with the certainty of all being effective and alike. His ideas were put in practice about 1793. Charles Newbold of New Jersey made the first cast-iron plow in the country, all cast in one piece, which was patented in 1797.

But for a long time a farm tradition, which seems to

have been imported from England, that the iron plow "kills the life of the land" hindered its general use. Corn land was thought to be specially injured by it and wooden plows were used by some farmers for plowing corn land, long after they were discarded for other uses.

"This ol' motor plow," said Kipling's bailiff not long ago, "may be all right in Ameriky, but it don't turn the earth not a spit deep — 'taint no good for the honor of the land." These traditions, foolish as they may seem, are yet signs of that care, love and almost reverence for the soil, "The honor of the soil," which was ingrained in our English forbears and happily runs in some measure in the blood of their descendants and which is now leading the most progressive back to more careful study of the nature of the soil itself and the methods of caring for it. For soil is seen to be not the dull, dead thing so many imagine but teeming with life. It largely determines the kind of crops which can be successfully raised in any region. While permanent exhaustion of soil is rare, an understanding of its nature, of the life within it and the sanitation of this life are necessary if agriculture is to meet the demands now made upon it.

The cast-iron plow was rarely used before 1820. The Hawkes plow made in Hartford, became popular between 1830 and 1833 and at that time "everybody had them." Fairbanks of St. Johnsbury also made iron plows in 1826 and their use spread rapidly down the Connecticut valley.

The cast-iron plow was much improved by Joel Nourse and his partners in Massachusetts in 1836 and was in great demand in the twenty years following. It is stated that 20,000 plows were sold by them in a single year. The number of patents on plows prior to 1830 was 124, up to 1848 between 300 and 400.

Apparently the steel and wrought-iron plow was patented in 1808, a side hill plow in 1831, the coulter attachment in 1834, jointer in 1884, and probably the wheel, gang and steam plow somewhat earlier.

The sulky plow was in use in 1844. The steam tractor plow was invented and used some time in the sixties. Threshing machines were introduced early in the nineteenth century.

There are various contestants for the honor of inventing the grain reaper but the record of the McCormick reaper will sufficiently indicate the time of the introduction of this labor-saving machine which has made possible the enormous expansion of wheat growing.

The invention began in 1809. It was not then a success though it had the main features vital to all grain cutting machines. Between 1820 and 1830 the machine was made serviceable and was patented in 1834. A number were made prior to 1844. In that year twenty-five were built, double that number in 1845 and the next year a yet larger number. From 1845 to 1860 the model remained unchanged except for the addition of seats for the raker and driver. The machine cut the grain and left it on the ground in loose bundles. The self-binder was added in 1872 using wire binders. In 1880 twine was substituted.

A successful mowing machine was patented in 1822 by Jeremiah Bailey of Pennsylvania, which "cut grass in the neatest manner, where land was smooth, with a swath about five feet wide and lays the grass in regular rows." But the foundation of the present mower rests on the patent of Hussey in 1833. Subsequent changes have been improvements of his idea. Mowers were not in general use before 1850.

The period of the invention of other farming tools now in use in greatly improved form was apparently in the three decades following 1830. The horse cultivator was devised by Jethro Tull of England early in the eighteenth century and of a drill seeder in 1733.

Jared Eliot's seeder and manure distributor has already been noted, (page 344). The first patent for a corn planter was granted to Eliakim Spooner of Vermont, in 1799. The first potato digger was invented about 1833.

The Connecticut Courant, July 31, 1821, announces "a machine for sowing small seeds with perfect regularity and in any desired quantity has lately been invented." But the manufacture of grain drills began about 1840.

At the beginning of the century farm wagons were almost unknown, two-wheeled carts being more convenient with oxen. Chaises and coaches then began to be used for travel. Light, one-horse wagons came into use about 1830.

Commercial Fertilizers. Until the middle of the century the fertilizers used in the State other than farm manure were lime in various forms, land plaster, swamp muck and marine mud and on the coast farms, fish, following the Indian practice. But soon after 1840, following the appearance of von Liebig's work on Chemistry in Its Applications to Agriculture, attention began to be called to concentrated or commercial fertilizers.

Probably Peruvian guano was the first used. Then the business of fertilizer manufacture began and chemical manures "as good as Peruvian guano" were put on the market. In 1856 the manufacture of dry fish manures began. The opening of mines of phosphate rock in South Carolina and later in Florida and development of the German potash industry early in the Sixties furnished the

material for an extensive use of soluble phosphates and potash salts. The concentration of beef slaughtering for the market in great establishments made necessary and profitable the reduction of offal to an inoffensive and transportable form, which at once found its use in nitrogenous manures. Nitrate of soda from Chili was also an important addition to the fertilizer material and in recent years the recovery of ammonia from the coke manufacture and the fixation of atmospheric nitrogen have further added to it.

In the early years some were sceptical or denied the value of commercial fertilizers and others had often too much faith in them, as a kind of patent medicine, to cure all defects of soil or tillage. The proper regulation of the trade and the protection from frauds, as is noted on page 378 became very necessary and was a chief reason, in the minds of many farmers, for the establishment of an agricultural station. A law was passed in 1869 requiring the labeling of commercial fertilizers with a statement of composition. But with time the manufacture of fertilizers has become as reliable as any other kind of manufacture, the goods are sold largely on the basis of their content of plant food and farmers have come to a better understanding of the way in which they should be used. At the present time 60,000 to 70,000 tons yearly are used in the State, for which farmers pay probably not less than five million dollars; by the census of 1919 about $4,900,000. Calculating the amounts paid on the value of the dollar in 1913, the increase in the amount paid yearly for fertilizers is the last decade has been about $360,000.

The foregoing shows the development of the educational and material aids to agriculture which were forced

by the increasing demands made upon it by the growth of population and the increasing diversity of employment.

It remains to notice the more important farming interests which have from time to time flourished in the last and the present centuries.

At no time have there been such large farms as in many other states.

Never has Connecticut been a one-crop State. In each period there have been a number of farming interests which were moderately profitable and at the same time others which were growing or decreasing in importance.

Horses and Mules. In the last century horses had been exported from Connecticut to the West Indies and the business was of considerable importance after the close of the Revolution and into the early years of the new century. The following, (43, 1855), from a correspondent in Coventry illustrates the conditions:

"From the settlement to the close of the revolution horses were of medium size, mostly pacers, small bones, large muscles and great endurance.

"Farmers in Coventry rode to Boston, 72 miles in one day and back the next. There was quite a business there, (Coventry) in raising horses for the West Indies trade. Every farmer of means kept five to ten horses, small boned, active, good under the saddle, mostly pacers and amblers. Then the raising of horses declined and mules were raised instead. Then the western states supplied the mule market at lower prices and that business ceased. About that time the merino sheep business came in."

Beef and Pork. At the beginning of the century Gov. Trumbull refers to the raising of beef and pork as a leading industry in the State.

Much was packed for sale in foreign parts and for years there was a good domestic demand for beef. In Litchfield County droves of two-year-olds were brought from Vermont and New York, fed during the winter on grain and roughage, finished off on pasture during the summer and sold in the fall. The same thing was done in other parts of the State. Devons, Short Horns and Herefords were common, but since 1840 to 1850 the number both of oxen and swine reported in the Census has shrunk though swine have increased in the last twenty years, but to only about half the number reported in 1840.

The introduction of dressed beef and pork by rail from the west has put an end to any very considerable beef production in this State.

Dairying and Dairy Stock. The original or so-called "native" stock of Connecticut undoubtedly came from Devonshire and the adjoining Counties of Somersetshire and Gloucestershire where the Devon breed prevailed and where had been the home of many of the New England settlers. This stock has been called mongrel or inferior by some writers. But any inferiority was probably due rather to the inferior shelter, pasture and feed, and lack of the chance to improve by breeding in the new country than to anything inherent in the animals themselves. "The Commons, the Greens, the Parks, so frequently found in our towns and cities, are landmarks of those early times when each man's cows were gathered into a common herd for better care and protection." (Holt).

The "Town" bull, "Town" herdsman and a "Town" brand also testify to the care of the community for the

individual owner of cows, as well as the constant mixture of good and poor strains.

Meadows and pastures first had some intelligent care with the opening of the new century. A writer in 1813 says: "The introduction of clover . . . has within the last ten years made a very sensible improvement in the agriculture of this country. Indeed it is only within the last twenty years that any grass seed has been sown, and it will be no exaggeration to say that more clover seed has been put in within the last eight years than has ever been since the country was inhabited."

It is true that there was little, if any thoroughbred stock in Connecticut until near the middle of the century, but on the other hand the stock brought over by immigrants would naturally have been as carefully selected as was possible and the records of butter and cheese made and sold in the early part of the century indicate that there were many "good milkers"—as is always the case —among these "native" cattle.

In 1819 the first full-blood Devon bull was imported and in 1820 two full-blood heifers by S. and L. Hurlburt of Winchester Center, (who were the originators, I believe, of the Hurlburt apple). From this stock the first working cattle came which commanded high prices.

The Hurlburt's raised and sold 1,500 of them. At the Hartford fair in 1825 the Hurlburts showed some fine Devonshire bulls and Ayrshire and Holderness steers and heifers. In a report of the Hartford fair it is said that "probably no section of our country can produce a finer race of native cattle than this County. Most of the foreign breeds of known and established excellence are now propagated within the limits of this Society, half blooded Holderness, Ayrshire and Devonshire cows took prem-

iums." The first pure herd book, of which I find notice, is of short horn cattle, begun in 1835 at East Windsor. The early importations of Jersey cattle are most difficult to trace. The animals were called indifferently Jerseys, Guernseys or Alderneys and they were interbred indiscriminately. The marked differences between Guernsey and Jersey today are largely changes which have developed by careful selection and breeding since 1870.

It is stated, (41, Vol. IV), that "nearly, if not quite the earliest importation of Jersey cows into Connecticut was in 1846 when J. A. Taintor brought into Hartford County twelve of the best cows that he could find on the Island of Jersey." The earliest imported Jerseys to become registered later were brought over in 1850 by Messrs. Buell and Norton to Connecticut. Somewhat later C. R. Alsop imported two Jerseys which he sold to Lyman A. Mills of Middlefield in 1869 and which appear in Vol. I of the Jersey Register. He continued as a breeder of Jerseys until 1896 when he sold his herd of 32 head to C. I. Hood of the Hood farm.

Says a recent writer: "When the "Great West" first began to make itself vocal in Jersey Club affairs, there were more Jerseys in Connecticut than in all the great west."

The first Guernseys, the records of which were kept so that they could be recorded in the registry, were imported in 1830 or 1831 by Mr. Prince of Boston. About 1874 a number of importations of Guernseys into Connecticut were made by C. M. Beach of West Hartford, which were the foundation of the herd of E. Norton of Farmington, who was the secretary of the Guernsey registry. The Guernsey herd book was established in Farmington.

The first thoroughbred herd of Holstein-Friesian stock was imported into this country about 1860 when W. W. Chenery of Belmont, Mass., imported a bull and four cows which founded the breed in this country. One of the earliest importers into this State was M. L. Stoddard of Newington. From him A. B. Pierpont of Waterbury bought a bull which, with other pure bloods, founded a fine thoroughbred herd. As this breed is distinctly high milk-producing it has become very popular since fresh milk rather than butter has become the chief product of dairy farms. A total of 7,757 Holsteins have been imported, most of them between 1879 and 1890 and from them our present thoroughbred stock has descended. The number of registered Holsteins in the country in 1915 was 92,048.

The first blooded Ayrshires brought to the United States, came to Connecticut in 1822. In 1837 the Massachusetts Society for promoting Agriculture established its first herd of Ayrshires.

Flint states (27), that "in the opinion of many good judges the dairy stock of New England has not been improved in its intrinsic good qualities during the last thirty or forty years. Cows of the very highest order as milkers were as frequently met with, they say, in 1825 as at the present, 1858."

The general conditions seem to have been these. Early in the century English cattle were imported, Durhams, Devons, Aberdeens, Herefords and Shorthorns and later, when dairy products, rather than beef and draft cattle became necessary, came Ayrshires, Jerseys, Guernseys and later Holsteins. But these were used at first chiefly for "breeding up" the dairy stock with little attention to establishing thoroughbred herds. Phelps says (53),

Shorthorns and Devonshires, prior to 1870 were leading breeds (in Litchfield County) "but when dairying as a business came in, Connecticut became the home of some of the best old world breeds.

In fact there was no science of breeding until Darwin laid the foundations in his series of books on biology, beginning in 1859.

Cheese Manufacture. In 1792 Alexander Norton of Goshen, being sent to the South for his health, bought cheese to sell again at the South. The venture was so successful that he continued the business, packing it first in hogsheads, but later in round boxes which he devised, each carrying two cheeses. This was the beginning of an important cheese making industry in this section. In 1845 Litchfield County made more than 2¾ million pounds of cheese annually, and Windham County 850,000 pounds. Dwight says, (24, Vol. II), "The inhabitants of Goshen are probably more wealthy than any other collection of farmers in New England equally numerous. The quantity of cheese made by them is estimated at 400,000 pounds. This place seems to have been a pioneer in the cheese manufacture on a large scale and no other place in the State did more than a very limited business in cheese making."

The first pineapple cheese was made by Lewis M. Norton of Goshen in 1808 and in 1810 a patent was obtained for the form. He continued till 1844 making cheese from his own herd of fifty cows. He then began buying curd from other dairies and built what is believed to be the first cheese factory in the country. Other factories soon started. Norton's son established one in New York State. The two made 65,000 to 70,000 pounds as late as 1889.

Large herds of Durhams and Ayrshires developed in connection with the cheese industry.

Up to 1780 making butter and cheese at home were the chief branches of dairy industry and cheese formed a considerable part of dairy production till near the close of the century, in places remote from railroad transportation.

From Connecticut the cheese industry and dairy farming in general was carried to the West. "The Connecticut Yankee brought a cheese hoop with him and wherever he went made cheese. Western Reserve has continued to be the dairy section of the State. There the old home made cheese trade developed, there the cheese factory had its beginnings, there the creamery had its development, and there is now the market milk center of the State."

Butter Making, Co-operative Creameries. Butter was made in families from the beginning and home-made butter became an article of trade as soon as the market permitted. Thus in 1845 Litchfield County made 1,290,000 pounds, Hartford and Fairfield Counties almost as much. As the trade increased and uniformity and excellence of quality became more necessary, there developed the creamery system and especially the co-operative creamery.

The Farmington Creamery, if not the very first, established, was certainly the one which incited the general movement. This was organized as a joint stock company in 1869-1870 with a capital of $4,000, afterwards increased to $4,500. In 1871 it received milk from 200 cows and in 1881 from 750. In 1889 there were five joint stock companies and two private creameries within a few miles of Farmington and sixty-three in the State. Wapping Creamery was organized in 1883, Windsor in 1885.

In 1889 Lebanon Creamery "sent tons of home-made butter to Providence," but this became unprofitable and a co-operative creamery was established to make cheese. But all the other creameries, it is believed, were engaged solely in making and marketing butter, the skim-milk being either returned to the farms or in many cases poured into the river.

The advent of the cream gathering system with deep setting left the skimmed milk on the farm, paying by the "space" of cream was supplanted by testing each patron's cream and basing payment on pounds of butter fat delivered. The use of the separator on the farm added to the economy of butter production. But the business of these creameries became unprofitable and they disappeared as rapidly as they had grown in numbers and importance. The reason is obvious. Prior to about 1878 the consumption of fresh milk in cities and towns was light and was supplied within a short radius of farms. At least the demand for fresh milk did not anywhere meet the supply. The surplus was used for butter making in the family, and sold to individuals or to the village store.

Then came the co-operative creamery as has been noted and an increasing demand for high-grade butter. But soon came the ruinous western competition in butter and the introduction of butter substitutes, which closed the butter factories of Connecticut. (In 1889 there were 63 of them, now only very few remain.)

The industry in condensed milk in this country began in Litchfield County. A Mr. Gale of Burrville put up milk under the first patent for condensing milk and employing sugar in the process. The Borden Condensed Milk Company, organized in 1863, did business in Winsted until 1866.

But with the concentration of population in cities and with increased attention to sanitation and the importance of rational nutrition there has come a greatly increased demand for clean fresh milk made under sanitary conditions, and since 1900 about three-fourths of the milk produced has been sold fresh. The production and proper marketing of such milk is now the only profitable branch of dairy industry. Shipping stations for fresh milk have taken the place of creameries, and while very little fresh milk is brought into Connecticut approximately twenty-five million quarts are yearly shipped from Connecticut to neighboring states.

Milk has also been made a safer food by pasteurization, seventy per cent of the fluid milk consumed in the State being treated in this way.

Better still is the production of certified milk from tested cows, with all sanitary precautions in the handling of the milk under rigid inspection by state officials.

The manufacture of ice cream, a recent but rapidly growing business (there are at least twenty factories of good repute in the State), is of great advantage to the dairy business by taking up its surplus milk in periods of over-production.

The number of milk cows in the State, over 85,000 in 1850, was nearly 128,000 in 1890 to 1900, but in 1920 sharply declined to 112,600, due to reduction of stock during the war, but rose in 1923 to 141,000.

Four inventions have made the present development of the milk business possible. The silo is the first, which gives a supply of green, succulent feed through the entire year and greatly reduces the need of pasture land. The practice of ensilaging green fodder is very ancient, but its general introduction into dairy practice is very modern.

In 1870 Goffert published in France a Manual of the Cutture and Siloing of Maize and other green crops, which brought it to general attention and he may be called the Father of Modern Silage. The earliest silos in the United States were built by Miles in Michigan in 1875 and by F. Morris in Maryland in 1876. Their use in this State immediately followed. The round silo resulted from the work of King in Wisconsin, 1892-1895. In 1882 there were less than 100 silos in the United States. It is estimated that now there are a quarter of a million in use.

The second, and later invention is the milking machine which has greatly reduced the labor requirement.

The third is the corn harvester which harvests and binds the crop, ready to be cut and put into the silo by machinery with a further reduction of labor.

The fourth invention is the Babcock test to determine the amount of butter fat in milk as a basis of payment, or as a check on adulteration.

In 1891 this was first used in the State to fix the payment for milk by its content of butter fat. Soon after, it was adopted by the creameries as a basis of payment, replacing other systems which gave a chance for dishonesty and discouraged the producers of high quality cream. At present it is useful as a test of the quality of market milk in the State and as a help to breeders in judging of the performance of individual cows.

The two most insidious and dangerous diseases of dairy stock are tuberculosis and infectious abortion. The danger to the public and loss to the farmer caused by tuberculosis is well understood, but infectious abortion causes more loss to the dairyman than is generally known.

The means of preventing it are now being studied at the Storrs Agricultural Station with encouraging results.

Good progress is now made in ridding the State of tuberculous cattle and of stopping their entry into it.

As a result of the work of the commissioner of domestic animals, the dairy commissioner and federal officials there are now 1,405 herds, containing 31,764 dairy cattle in the State proved to be free from tuberculosis. Of these 410 herds, numbering 8,797 head have been found free for two years or more. This of course, is only a small fraction of the total number of cows in the State, but it marks the early stages of a movement to entirely wipe out bovine tuberculosis and by so doing to lessen the disease in the human race.

The Sheep Industry. In the nineteenth century Connecticut developed an extensive sheep industry, brought into the State and country the merino sheep which were the foundation of the best flocks everywhere, and finally has seen the steady decline of sheep raising almost to the vanishing point.

The introduction of Spanish merino sheep is of special interest because it was the work of a Connecticut citizen and Connecticut was the center from which this breed was distributed, being the foundation of the improved Vermont merinos and the American merinos which have been of inestimable value to the country.

It is said that two merino ewes and a ram were sent to a gentleman in Cambridge in 1798, which were butchered and eaten. In 1801 a merino ram, Dom Pedro, reached this country and was used as a sire in New York and Delaware. In 1801 Seth Adams imported a merino ram and ewe and received a prize from the Massachusetts Agricultural Society for the importation of a pair of superior breed, But for the establishment of the breed

on American farms the country is indebted to Gen. David Humphreys, diplomatist, poet and farmer. In a discourse delivered in 1816, he indulges the hope that "this acquisition of the golden fleece is an event of some importance" and that "it will possibly be remembered when I shall be no more." He was awarded a gold medal by the Massachusetts Society for Promoting Agriculture and later Connecticut gave him a testimonial in recognition of his services.

In 1802, (54), Gen. David Humphrey, U. S. Minister at Madrid, retired from office with the close of the Adams administration. He had become a special favorite among the grandees from some of whom he had acquired a deep interest in the Spanish sheep. Being contrary to American custom he could not accept the present usually bestowed on a departing minister but at his suggestion he was tacitly permitted to send a flock of pure blooded merinos to his farm at Derby, Conn. This consisted of 75 ewes and 25 rams, nine animals having died on the voyage.

His farm at once became the center of the wool growing interest.

At first farmers were not greatly interested, but when America was shut off from foreign wool the interest in wool increased. In 1806 Humphrey was glad to get $300 for a ram and two ewes. In 1808 he sold a ram for $1,000. Crossing merinos with common sheep was found to double the shearing of wool. Connecticut became the center of a sheep mania and in 1813 there were estimated to be 400,000 sheep within the State. From there the merino stock was distributed through the sheep raising sections of the country.

In 1810 merino wool sold in Hartford at the following

prices: Full-bred, $2.75 per pound. Half-bred, $1.00. Quarter-bred, 62 cents.

Regarding the yield per head little data appears. The fleece of a pure merino lamb in New Milford, (1810) was said to weight nine pounds, the carcass, sixty-three pounds.

In 1824 the Saxon merinos were brought in and largely raised.

About 1815 the tariff on wool was removed and a decline in the sheep industry followed, lasting till 1825. Then for twenty years the production of fine wool greatly increased.

In 1840 there were over 400,000 sheep in Connecticut (U. S. Census) and a production of nearly 900,000 pounds of wool. The production steadily decreased from that date until, in 1920 there were less than 12,000 sheep in the State with a wool production of about 42,000 pounds.

In 1810 and 1811, while Spain was at war with Napoleon, her flocks were broken up, eaten by ravaging armies, stolen by the French and thousands were smuggled through Portugal to England. The Junta, in order to get funds, sold the choicest stock and it is estimated that 20,000 full blooded sheep came to America. Most of them probably were used for grading up native stock rather than for building pure blooded flocks. The prices here fell to one-tenth of the prices charged at the height of the excitement following their introduction.

Carding machines for this fine wool were soon found in every hamlet and Congress increased the *ad valorem* duty on wool from five to thirty-five per cent.

Fruit Growing. While the fruit crop was considerable at the close of the preceding century, choice varieties were few. Most fruit trees had been raised from seed. The apples were of all colors and flavors, but of these "native" kinds some were choice and have held their place. Thus the Hurlburt, as already noticed, was a Connecticut seedling. It is said that the original Northern Spy in New York came from seed from Salisbury, Conn. Hadwin states that the first variety of apple developed in New England was the Rhode Island Greening in Portsmouth, R. I. The original tree stood near an ancient tavern known, in 1765, as Green's Inn, and for years its fruit was called "Green's Inn apple."

The Roxbury Russet probably originated in Roxbury, Mass., soon after the settlement of the country. The first settlers at Stonington came from Roxbury in 1649 and it is said brought this variety with them. It is undoubtedly the oldest of native sorts. The original Baldwin stood in Wilmington, Mass., and was first recognized as a favorite fruit about the middle of the eighteenth century.

In the early part of the century, James Hillhouse of New Haven, (44, Vol. I), received scions from the King's gardener in France and grafted 150 varieties of apples and 40 of pears. President Dwight of Yale College, early in the century, (24) gives a list of twenty leading varieties of apples grown in New England, from which fruit may be had in every month of the year except July. Gold states that in the early part of the century Pearmain and Seeknofurther were common and that the Baldwin came into general use later.

At the beginning of the century the apple product was mainly consumed as cider. Soon after, and perhaps in

consequence of the closing of trade with the West Indies which stopped the importation of rum, the manufacture of cider brandy developed rapidly. Many farmers in Hartford County made 300 to 600 barrels of cider and some few 1,000 barrels yearly, eight to ten barrels making one of brandy.

There followed a temperance revival which in a few years arrested this manufacture. Many cut down their orchards and all neglected them.

The more careful selection and improvement of varieties of apples probably began about 1835 to 1840. In 1842 Titus Gaylord of Cheshire had an orchard of 250 trees of "engrafted" winter apples. Since that time the planting of orchards of carefully selected kinds of apples has developed into a special agricultural industry. The crop seems to have reached a maximum in 1900 with a production of 3,708,900 bushels which fell according to the Census of 1920 to 1,395,100 bushels. The quality of the fruit and the careful grading of it were never so good as today.

The pests which attack orchards are many. The two which have proved most injurious are the coddling moth and the San Jose scale. The former is everywhere present and persistent and must be controlled every year by spraying. The San Jose scale, brought into the state on nursery stock was first found by the botanist of the Agricultural Station in 1885.

It spread rapidly and by 1901 was found in seventy-eight places in the State. Many orchards were ruined, many others seriously damaged and the whole industry threatened with ruin. It was finally controlled by a rigid inspection of nursery stock and by the use of sprays. Parasites also developed which destroyed a great deal of the

scale on neglected wild growth. By 1914 the pest was no longer prevalent but lately there has been a fresh development of it.

Excellent seedling peaches were grown in the State before 1800 and long afterwards. Platt, (18), says that about 1840 peaches were as common about our farms as apples, and seedling trees 90 or 100 years old were reported. Later it was believed that the day of peaches was past for trees lived hardly long enough to give a single crop.

In the Seventies peach growing was at its lowest ebb; yet between 1845 and 1875 there were at least thirty orchards in the State, one in Southington of twenty acres. In 1893 Platt estimated that there were about 160,000 peach trees in the State, about half of them set within the last three years.

Peach "yellows," known as early as 1815, (23, 1845), became very destructive and in 1842, is said to threaten the destruction of all peaches. Complaint is also made of the "curl." Rareripes, Admirables, Royal Kensington and Noblesse are mentioned as popular varieties and probably by that time the peach was somewhat generally grown.

In 1875 J. H. Hale of Glastonbury planted the first commercial peach orchard and introduced and greatly fostered this branch of farming in the State.

In 1878 P. M. Augur of Middlefield planted a second orchard of 1,500 trees, but because of frost injury the first considerable crop of peaches was not gathered until 1887, and from then on the business rapidly increased.

The industry has had very serious setbacks, due to insect and fungus invasions and the vagaries of our winter climate, but partly owing to the fact that the Connecticut peach is at its best when those from other orchards

further south are out of market, the business is fairly successful. The peak production was in 1914-1915, probably 500,000 baskets. Hale states that in 1901 there were less than 100,000 peach trees in Connecticut while ten years later there were three million.

This, however, must have been a peach stampede, like the '49 rush for gold in California, which quickly subsided, leaving dead and neglected orchards.

The perishable small fruits have been grown since the early days of the Colony but only became of commercial importance late in the century when quick transportation and the demands of nearby cities made any considerable production profitable.

Since the passage of the Volstead Act, and in consequence of it, the growing of grapes in this State has increased enormously though there are no statistics to show this expansion.

The Seed-Growing Business. While before the Revolution some garden seeds were imported from London by dealers and ship owners, yet most families saved seed of their own raising for their use. The oldest seed firms were established in Philadelphia, the first being David Landreth, established in 1784.

The Shaker colony in Enfield probably started late in the eighteenth century.

The Shakers prepared for market medicinal herbs and garden seeds and their gardens are said to have been very profitable, because their products were everywhere sought, being esteemed better than any other.

They frequently had large orders from Europe for medicinal herbs.

In two sections where vegetables were grown to some

extent for market the possibility of commercial seed growing was recognized. One of these sections was Wethersfield. As has been noted, Wethersfield had long been a center for onion growing and vegetable gardening. Gradually it became a center for seed production rather than truck farming.

The seed business has continued there strong up to the present, in spite of the great changes in commercial and local conditions.

The first general seed business in Wethersfield is believed to have been started about 1820 by James L. Belden. It proved to be profitable and in 1838 was sold to Franklin G. Comstock and his son William G. Comstock.

Later W. G. Comstock with Henry Ferre founded Comstock, Ferre & Company, incorporated in 1853. For 86 years the business has been carried on under the Comstock name and for at least 104 years there has been the same established business on their property. Other firms were later established all of which had a country-wide reputation. Thomas Griswold & Company, established in 1845; Johnson, Robbins & Company, in 1855; William Meggat, in 1866; and Hart, Welles & Company, in 1894, which was succeeded in 1916 by the Charles C. Hart Seed Company.

William B. Comstock, a strong, aggressive man, built up a fine seed trade in the South, having for a time a branch store in New Orleans and he pushed out on the frontier in the days when St. Louis, Chicago and Minneapolis were the extreme "West," almost in advance of railroads. He seems to have started the commission box business. He devised seed bags, with printed cultural directions and wax seals, the different colors of which represented the year of packing, so that the seeds longest

viable, cucumbers, beets, etc., could be carried for five years and others for shorter periods, depending on the duration of their vitality. Comstock laid out the first route of his seed wagons, up the Connecticut valley to Springfield, Vermont and later they covered New England and parts of Canada and other states. Later he put up seeds for the southern trade, shipped to the principal cities from Washington to New Orleans. This branch of the business was dropped by Comstock, Ferre & Company, in 1888 so as to specialize in wholesale trade, but is still carried on by the Chas. C. Hart Seed Company of Wethersfield, probably the only firm in the State specializing in that line.

Onion growing reached its height in the period from 1860 to 1885 and for some years represented many thousands of dollars in farming operations.

In less than fifty years seed growing has swung across the continent and the Pacific and western states have for years been able to produce for a less price, largely because of cheaper labor and greater yields with less liability of loss from insect pests, storms, etc., and while Wethersfield is still a center of a large seed trade, seed growing has shrunk to a very moderate amount. The secret of the development of an extensive seed business in Wethersfield, as in the Milford and Orange region, lies in the fact that the men engaged in it were first of all extensive vegetable growers who had for years carefully selected types of one or more vegetables to secure purity and quality, which were recognized as superior and were in demand. It was skillful selection and growing, rather than selling, which made the great reputation of the place.

The entire seed trade acknowledges its obligation to these growers.

The foregoing facts are taken from an address to the Wethersfield Business Men's Association in 1916 by Mr. S. F. Willard.

The other seed growing and seed trade center of the State is the region of Milford and Orange and in the town of Westport where onion seed as well as onions were at one time extensively raised.

Seed growing as a business was perhaps practiced here in the Forties.

In 1857 E. B. Clark of Milford, succeeded by the Everett B. Clark Seed Company, began the seed trade industry in that section of the State, and inaugurated the growing of sweet corn seed as a business. S. D. Woodruff of Orange, succeeded by S. D. Woodruff & Sons, were also prominently engaged in both growing and trading in seed.

There followed a great expansion of the business, but since 1880 the business has followed the same course as in Wethersfield, viz., great shrinkage in seed production, while the trade in seeds has increased.

A considerable number of varieties of seeds is still grown in Connecticut, largely in the Milford and Orange districts, several of which are not grown elsewhere of as high quality, namely onions, beets, and sweet corn. The Connecticut sweet corn seed is in demand as "stock" seed from regions in the West and South, where home-grown seed degenerates in a few years and fresh stock must be introduced.

For the two seed trade centers sweet corn seed is grown in various parts of the State and it is in large demand from the canneries of the country for it is a surer crop here than in the canning districts, besides being of superior quality.

Probably 1,200 acres are planted at present to sweet corn for seed, very little to onions and perhaps 75,000 pounds of beet seed of exceptionally fine quality are yearly grown in the State.

VEGETABLE GROWING, a very profitable farming industry in the earlier part of the nineteenth century, did not apparently meet much serious competition from other states until the last quarter of the century. As early as 1847 a small quantity of lettuce, radishes, mint and strawberries were brought to New York from the South, but in the spring of 1885 the first all-rail shipment of Southern garden truck came to New York.

In the Eighties also came the first car loads of oranges from Florida and strawberries in large quantities. At present not only are the more solid fruits and vegetables brought into Connecticut from other states but also the very perishable things, like lettuce, asparagus and spinach from the far south fill our markets at certain seasons.

In spite of outside competition, however, the production and sale of strictly fresh vegetables for our home market, seems likely to be an enduring business.

POTATOES were said to have been raised in the western part of the State in 1802 (58), from seed balls, the second or third year from the ball.

About 1842 (20, III), potatoes were a principal crop in Greenwich. The average yield was 200 bushels per acre and they were shipped to New York. For many years Greenwich sent more potatoes to New York than all the other coast towns of Connecticut and they made Greenwich the richest town in the State in proportion to its population.

The Census of 1840 reports a larger yield of potatoes

than in any decade except 1900 and the production has fallen from about three and a half million bushels in that year to less than half that amount in 1920.

Poor seed and a number of rather obscure plant diseases account in large part for the decline.

Onions. These were at first grown wholly as a vegetable and Wethersfield became the center of the business in the eighteenth century.

In 1823 Dwight reports that the growing of onions there is still profitable but not so extensively practiced as earlier because of competition.

Gradually the business shifted to onion seed production as noted elsewhere.

Later onion growing became extensive in the Fairfield region, being specially profitable during the Civil War when the "Southport Globe" was raised and sold for ten dollars a barrel. It was the best keeping variety ever put on the market. Probably 100,000 barrels were raised there in the war time. In 1871, onions are reported as the chief crop in Westport and Southport, yielding an average of 500 bushels per acre and the highest recorded yield, 900 bushels. 300,000 to 500,000 bushels were yearly raised in that town. In 1885, a tract six miles square in Westport grew 80,000 barrels of onions which was only two-thirds of a normal crop.

Soon after, the price of onions fell greatly. The white onion was more in demand and was extensively grown. But the difficulty of keeping them, the prevalence of fungous diseases, labor scarcity and a great rise in real estate values together nearly extinguished the onion growing business.

Tomatoes were scarcely grown in the State until the

second quarter of the nineteenth century. T. S. Gold reports that in 1830 he planted tomatoes in his flower garden in Goshen and got an abundant crop. They were called "love apples" and he was told that "they eat them in France" — no one in Goshen did. They are now very extensively grown in the State, both for marketing and for canning.

Tobacco is the one crop which has shown steadily increased production from the beginning of the century to the present. For the last fifty years at least it has met with serious competition from Florida and Georgia, and from Sumatra (since 1881), but in spite of this it has almost constantly held its place as a superior grade of leaf for cigar wrappers. Its growth, rather general through the State in the earlier years, afterwards became limited to the light, sandy soils of the northern Connecticut valley and to the somewhat stronger soils of the Housatonic valley. On such soils alone can tobacco be grown which has the qualities required by the trade for cigar wrappers or binders; the only uses to which it is adapted. In 1840 the production was 235.8 tons, in 1920 2109.6 tons, a nine-fold increase.

Prior to 1801 not more than ten tons of tobacco were grown in Connecticut yearly, and was mostly shipped to the West Indies in hogsheads. The growers got from $3.00 to $3.33 per hundredweight. This was a narrow, so-called "shoestring" tobacco. About that time plug and twist tobacco were made in East Windsor, (at first by a Mrs. Prout from Virginia), and also cigars, known as "paste" cigars and later as "long nines" or "Windsor particulars." (68, 1856).[23]

[23] Col. Israel Putnam, of Wolf Den fame, is credited with the introduction of cigars into Connecticut. It is said that he went as Lieut. Col. of the

In 1810 factories were established in East Windsor and Suffield which also used both Spanish and Connecticut tobacco in their cigars and peddled them through the country from wagons.

About 1824-1825 a packing house was established and the leaf, in bales of 100 pounds, (another writer says 400 pounds), were enclosed in boards on four sides with the ends exposed.

Till 1833 "shoestring" tobacco was grown. But about this time a broadleaf strain was brought by B. P. Barbour of East Windsor, from Maryland, which was far better suited to cigar manufacture, by its shape, texture and neutral flavor. The somewhat careful sorting of the leaf before sale began about 1840.

The first tobacco was grown in the Housatonic valley, at Kent, in 1845 and soon after in New Milford. By 1870 it became a leading product.

In 1890 tobacco was first grown under shade in this State by the Connecticut Agricultural Station and the station also introduced with it the method for the rapid fermentation of the leaf in bulk instead of in cases. Both practices immediately gained favor and in 1893, 645 acres were grown under shade in the Connecticut valley.

Then, owing to lack of experience in curing and fermentation and the use of unselected "Sumatra" seed, the raising of shade tobacco suffered eclipse and the acreage of the next three years ran from 40 to 70 acres, but rapidly increased with increased skill in raising and handling the crop to 6,100 acres in 1918, the larger part of it

first Connecticut regiment in the expedition against Havana in 1762. Shortly after its capture, while on a scouting expedition, he saw nearly every native smoking a big, roughly rolled cigar. A trial of them so pleased him that he brought home a quantity, "as much as three donkeys could pack". Later he kept a tavern in Pomfret and distributed his cigars which soon became very popular.

in Connecticut. The shaded tobacco under favorable conditions commands a much higher price than that grown in the open. In 1924 the acreage was 5250.

In 1856, (43, Vol. I), an effort was made to induce growers to put their crops in a general warehouse in order to rid themselves of the speculative system of buying and selling.

It was claimed that in the three years during which it had been practiced, on a limited scale, growers had got from 50 to 75 per cent more for their crop than had been obtained from "speculators," and had also raised the speculators' prices. Apparently an organization was effected which continued for some years. How much it actually accomplished or how long a course it ran, does not seem to have been recorded.

In the fall of 1922 The Connecticut Valley Tobacco Association was formed, its members binding themselves for five years to sell to the Association all of the tobacco raised by or for them. It operates 104 warehouses, grades all the tobacco from its members, sells it and as sales are made pays the members according to the grading of their crop, after paying the expenses of the organization. At present it controls 87 per cent of the acreage of New England tobacco which is grown in the open.

Corn. We have seen that maize was the staple crop and staple cereal food of the settlers in the seventeenth century. Gradually wheat displaced it, at first only among the more prosperous in the centers.

But baked in thin cakes, forerunner of the "hoe cake" of the South, cooked as "hasty pudding," with molasses as a sauce, later made into bread with rye ("rye and Injin"), corn meal was widely used in the country in the

eighteenth and early nineteenth centuries, and now, while it has almost passed as a family food, it has not passed from some of us as a not unpleasant boyhood memory.

We have also noticed that corn has become a chief reliance of dairymen to make good the lack of pasturage in summer and to provide a succulent food in the long winters. While the silo did not come into general use before 1880, the value of the corn plant for fodder was understood long before. A writer in the "Connecticut Courant" in 1821 calls attention to corn fodder and claims that, properly cured, it is as good as hay. He cuts it when it is about ready to spindle and cuts it high enough so that it will "spread again" and give a second crop.

The production of the grain increased steadily since 1840 till 1909.

The yield in 1919, 2,062,495 bushels, was 468,000 bushels less than in the preceding census, and may be explained by a poor season and in part by the larger production of wheat after the war. This larger production of shelled corn includes a very considerable amount of sweet corn seed shipped out of the State to canneries and seed dealers.

Rye and Oats. The crop of oats, which in 1840 nearly equalled that of corn, has steadily declined to the present time.

The production of rye, always grown in smaller amount than oats, has likewise steadily declined, though it is still used quite extensively as a cover crop and green manure.

Wheat. Connecticut has never been a considerable grain producing State. Even in the eighteenth century its wheat supply was drawn largely from New York and

Pennsylvania, and after 1850 the "golden West" almost monopolized the business. Yet the State has been slow to quite abandon the growing of wheat. Thus in 1845 a writer in the "Cultivation" says that more or less wheat has been grown on his farm in Cheshire for forty-five years, and the crop was a failure not more than three times in this period. For the fifteen years since he has owned the farm there has been no insect injury. His wheat runs 62 pounds to the bushel.

As late as 1871 wheat growing was not uncommon. Thus 100 acres were grown in Westport, with an average yield of 30 bushels per acre.

Greenwich at the same time reported that the majority of farmers raised enough to supply them with bread.

It is interesting to note that in the financial crash of 1836-37 so wide a ruin of wheat was wrought by the Hessian fly that more than 1,360,000 bushels of wheat were imported into this country from Europe.

From 1850 to 1880 38,000 to 50,000 bushels of wheat were yearly raised in Connecticut. Then the production fell to about 7,000, 9,000 and 12,000 bushels in the three following decades, but rose to 50,000 bushels in 1919, a larger crop than at any time since 1840. This was a war time emergency. Very many farmers raised satisfactory crops of wheat and found that on good land a yield of 40 bushels per acre was quite possible.

With the great increase in poultry keeping, it is not likely that wheat growing will immediately fall to the pre-war basis. It is quite likely that to supply feed for poultry and for dairy stock it may find a place with profit in farm rotations.

Hemp. As has been noted, hemp was grown from the early days, being encouraged by bounties. About 1810 it seems to have been quite successful on the fertile banks of the Connecticut River and on warm uplands.

Long Meadow, just over the Massachusetts line (19. 1810), is stated to have sold the year's crop in Boston, New Haven and New York for $35,000. Three to twelve hundred pounds per acre could be raised, and it was quoted at $412 per ton in Boston, but $200 was a fair price when trade with Russia was open. Dwight says (24, Vol. I). "Hemp has lately excited the attention in earnest. At Long Meadow and at Enfield, Conn., and at some other places in the neighborhood, it grows luxuriantly and is undoubtedly the most profitable crop that can be raised." In 1804 the General Assembly put a bounty of $10 a ton on domestic hemp or flax which was later repealed. But as late as 1829 land on which hemp was raised was exempt from taxation.

Probably the business never attained any great volume. The census of 1860 reports the Connecticut production of hemp as three tons, and it is not reported later.

Flax was widely grown in this State in the first quarter of the century and in some places in rather large amount, both for the fiber and for the seed. Thus in 1802 Milford raised 100,000 pounds of flax and 4,000 bushels of flax seed. In 1807 (36. II) Fairfield exported about 20,000 bushels of flax seed a year, and later more flax was grown there than in the whole of New England beside (24, III). The average crop of flax was about 200 pounds with 6-8 bushels of seed.

In 1810 (9), while flax in the country exceeded both wool and cotton as textile fibers, it was not suited to New

England conditions because of the labor and fertilization required, but as it was needed for the making of tow cloth and linen, a small area on the farm was generally planted to flax, until about the middle of the century, and by 1880 the growing of flax had practically ceased in this State.

The course of Connecticut farming since about 1880 and its present condition have been admirably set forth by Prof. I. G. Davis of the Connecticut Agricultural College in the "Agricultural College Review," March, 1924.

What follows is chiefly an abstract of his conclusions:

During the last forty years, in the rapid changes in economic conditions, Connecticut agriculture has been forced to continual readjustment to meet these conditions. This has resulted in more intense methods of farming and elimination of the less productive and more remote farm lands.

"Our agriculture of forty years ago was a livestock industry, based on hay and pasture." These are crops requiring a broad acreage. But when the seemingly exhaustless, fertile lands of the West were opened, wool, mutton and beef, easily produced and easily carried or driven to shipping points, was brought to market at prices with which Connecticut farmers, with small fields and brush pastures, could not compete and make a living. So these lines of farming had to be given up, and, as in every other business, changed conditions had to be met by changed methods and changed production.

The extensive production of beef, sheep and dairy manufactures (cheese and butter) was therefore gradually abandoned. But these are hay- and grass-consuming industries requiring extensive acreage, and their abandonment inevitably caused the decrease by more than one-

half in improved farm acreage. The use of motor vehicles for local transportation instead of horses accounts for a further reduction in hay acreage.

What has been the result?

1. The production of livestock products, which are easily transported (meats, wool, butter and low-grade eggs) has rapidly declined, while the production of things which, because of extreme perishability, can be produced only where they can reach the consumer quickly, in perfect condition, has increased. Fresh milk and high-grade eggs, produced for local market, show this decided increase. Dairying does not require extensive pasture land. Grain feeding, the use of soiling crops and the extensive use of corn silage are substitutes for grazing land. The fact that corn is the only food crop which has not declined but actually increased since 1880, is explained by its extensive use in dairy feeding.

2. The growing of cash crops which have a high weight per unit of value, such as hay for sale, potatoes and cabbage, declined during the period.

Low freight rates tended to discourage raising them here, but the higher freight rates now prevailing may bring them in again. There are signs of this revival helped by better methods of production which the Agricultural College is introducing.

3. An advance has been made in raising crops in which we have distinct soil, climatic or seasonal advantages, which enables us to more than meet the quality or prices of our competitors. Such are tobacco, sweet corn (for immediate consumption or for seed), apples, peaches and perhaps tomatoes. Thus the production of tobacco has increased three-fold since 1880. Peach orchards have been almost entirely developed in the last forty years. The

farm apple orchard has been slowly dying, but the business apple orchard, with modern methods of production and marketing, is making sound and consistent progress, and the outlook is very promising.

4. Growing extremely perishable cash crops, in which the marketing expense of competitors is very high, due to distance and perishability, certain vegetables for instance, is increasing. It may be added that the more enlightened taste of consumers will be a help to this industry.

They are learning that slightly wilted vegetables are better fitted for cattle than for the "home circle," and that sweet corn, after twenty-four hours' keeping, may serve for "roughage," but is not a delicacy.

Now, what has been the result as shown by statistics? Does it justify the opinion so often expressed, that Connecticut agriculture is ready to perish, or at least is continuing in a dead-and-alive condition?

Prof. Davis, who has had exceptional opportunity to study the question, makes the following statements:

"Even when all corrections have been made for the fluctuations of the dollar for the past forty years, Connecticut agriculture shows a five-fold increase in the value of its products per acre, and a three-fold increase of the value of the products per farm, and the total value of the products of the State has doubled. Specifically, the increase in the value of the products of the farm since 1880 has been from $10 per acre to $48.60 per acre, and the value of products per farm from $540 to $3,100." [24]

The average Connecticut farm is producing somewhat more than the average in the United States.

Prophecy regarding business ventures is futile. Faith in the future, based on the record of the past, which is

[24] Changed by E. H. J. to prices as per commodity index, (1913-100)

the sentiment of the legend on the seal of this State, is reasonable, and necessary to success.

"There certainly has never been a time within sixty years," says Prof. Davis, "when the opportunity for a man with the right training and character, to farm with the prospect of getting a good income and attaining a high standard of life for himself and his family is as good as it is today."

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STATE FINANCE AND TAXATION

By John M. Wadhams

Born in Goshen, September 14, 1870. Secretary and treasurer of the Torrington Savings Bank and for many years prominent in State politics. Educated in the public schools, the Goshen Academy and the Suffield School, of which he is now chairman of the Board of Trustees. He was a member of the Connecticut House in 1911 and of the Senate in 1913 and 1915. In 1915 Governor Holcomb appointed him a member of the State Board of Finance and he has been chairman of the board since that time. Mr. Wadhams is a member of the Society of Founders and Patriots and of the Society of Colonial Wars and a director in a number of philanthropic and financial institutions.

ONE of the contributing causes that brought about the agitation for a change in the form of Connecticut Government and the adoption of the Constitution of 1818 was the method of raising the revenue for the expenses of the Commonwealth. Connecticut had lived under the provisions of the Charter of 1662, granted by Charles the Second, which recognized a very close union of the Church and State as the seat of government; and, as the Congregational Church was the prominent one in nearly every community, it was the most influential. A system had grown up supported by legislative action that gave the organization great power. The fact that all the people were taxed to support this particular sect led to discussion, especially when the other denominations increased in numbers. The words in Section 4, Article 1, of the Declaration of Rights—"No preference shall be given by law to any religious sect or mode of worship" brought forward a lengthy and warm debate. A substitute was offered—"That the rights of conscience are inalienable; that all persons have a natural indefeasible right to worship Almighty God according to their own consciences; and no person shall be compelled to attend any place of worship or contribute to the support of any minister contrary to his own choice." This was defeated, and the last clause referring to the attendance and compulsory contribution toward the expense of any church was offered, that was defeated also.

This discussion portrays the different views of the Colonists that had prevailed previous to the adoption of the Constitution of 1818, and at the time of its adoption various attempts had been made to change the Statutes

in order that recognition might be given to others than Congregationalists by exempting those known as Separatists from paying taxes for the support of the recognized church and the expense of building or repairing the meeting houses. In order to be relieved of this form of taxation they were obliged to file a certificate with the established church signed by an officer, where they ordinarily did attend, that they were in attendance and contributed toward its support, and any person who absented himself from public worship on the Sabbath without sufficient cause was fined for such absence. This "Certificate Law" was not popular with the denominations aside from the Congregationalists, and led to many interpretations .John Leland, a Baptist elder, published a pamphlet soon after its enactment denouncing it under the title: "The Rights of Conscience Inalienable and therefore Religious Opinions not Cognizable by Law." His opposition was based upon the theory that this was founded upon the principle "that it is the duty of all men to support the Gospel and worship God," and that "human legislatures have the right to force them to do so." "The certificate that a dissenter produces to the society clerk must be signed by some officer of the dissenting church and such church must be Protestant-Christian; for heathens, Deists, Jews and Papists are not indulged in the Certificate law; all of them as well as Turks must therefore be taxed to the standing order, though they never go among them or know where the meeting house is."

Complaint was also made by the Dissenters that special grants had been made to Yale College, which was under the exclusive control of the Congregationalists, that were

not consistent with "equal rights and privileges of Christians of every denomination."

The Baptists and Methodists strongly objected to the enforcement of any law that compelled them to pay taxes for the support of any ministry and demanded that "legal religion" should be abolished and "the adulterous union of the Church and State be forever dissolved."

The Episcopalians sought aid from the State for an endowment for the Academy at Cheshire with only partial success. When the Phoenix Bank at Hartford was chartered in May 1814 the State received a bonus of $50,000.00, a portion of which was paid over to a fund known as the "Bishop's Fund" used for the support of a bishop. The Episcopalians complained that the portion belonging to them was withheld from the trustees and that Yale College benefited at their expense. All of these denominational differences contributed to the desire for a change in the form of government and assisted in the adoption of the Constitution of 1818.

The Constitution was adopted by the small majority of one thousand five hundred and fifty-four (1,554) in a vote of twenty-six thousand two hundred and eighty-two. A vote so evenly divided shows that the proposed changes were not agreeable to all the people. The editor of the "Connecticut Mirror" said: "Our venerable customs, usages and law have been assailed with more than vandal rudeness; our form of government, under which for nearly two hundred years we have enjoyed privileges and blessings unknown to any other people upon earth, has been swept away." The editor of the "Hartford Times" took the opposite view and said: "The sessions of the General Assembly have been reduced to one in a year, thereby saving about fourteen thousand dollars annually;

the Superior and County Courts reorganized, and the number of judges reduced nearly one-half which will proportionately reduce the expense. The salary of the commissioners of the "School Fund" has been reduced five hundred dollars; arrangements made to place those funds which were in a very neglected and ruinous condition in a safe condition; the duties of the treasurer and commissioner of the "School Fund" separated and regulated and a system of taxation, founded upon just and liberal principles, nearly perfected."

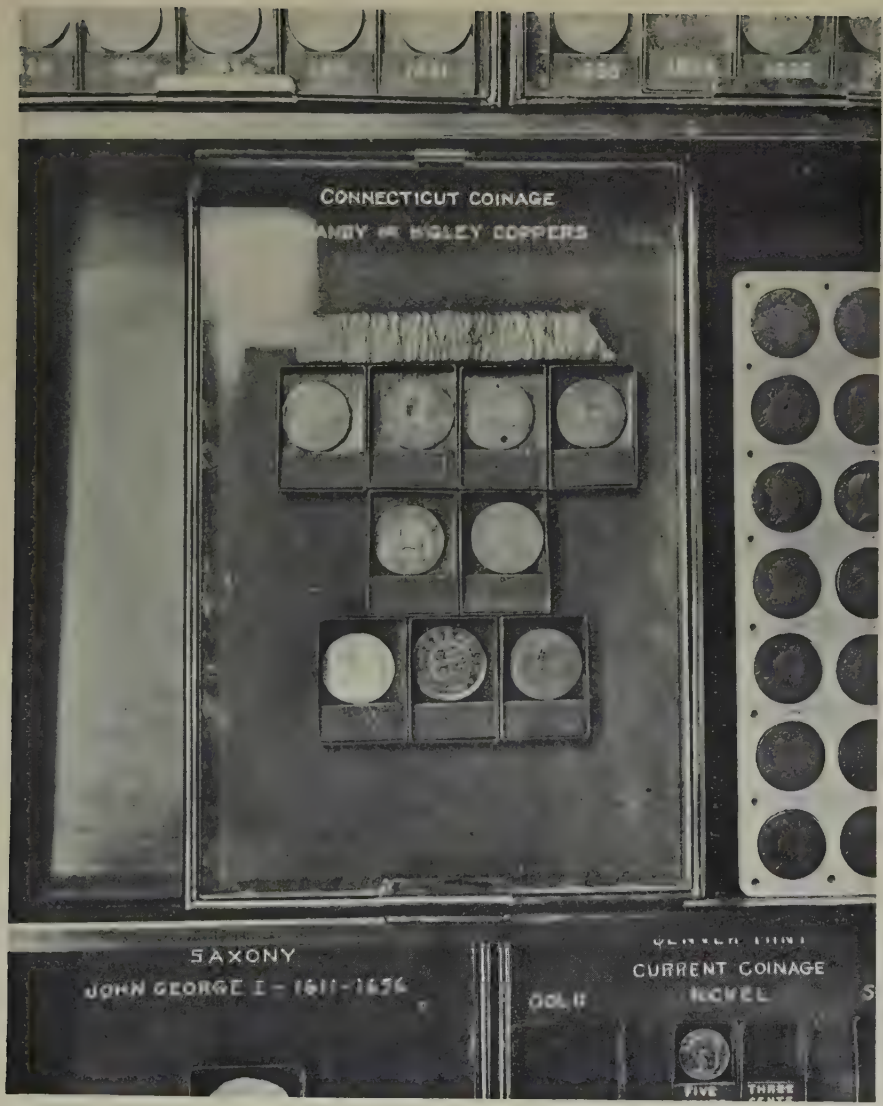
Speech of Oliver Wolcott

On May 13th, 1817, Oliver Wolcott received the oath of office and delivered his inaugural address to the "Gentlemen of the House of Representatives" a portion of which referred to the principles of taxation as they existed at that time, and which exist still after the lapse of a century:

As the ancient system of taxation established in this State has ceased to be adapted to the circumstances of the people, I recommend that measures be adopted, with a view to a deliberate, and systematic revision. To this end, the formation of statements, exhibiting in detail the component articles which formed the general list, both in respect to the State, and the particular Townships, with accounts of the annual contributions of the people for every purpose, distinguishing the permanent from the extraordinary expenditures, appears to be expedient. In forming a new system which must affect every individual, it is proper to combine every resource of information and to possess data, by which the effect of every principle may be fairly estimated.

From sources of information collected at different times, and from continued reflections, my mind is convinced that the effects of the present system are far more injurious than can have been generally supposed; and as illustrations of this opinion, I submit the following observations to your indulgent consideration:

In respect to the Capitation Tax, it may be observed that an



Section of the Joseph C. Mitchelson Collection, Memorial Hall, State Library. Showing "Granby" or Old Newgate Pennies.

assessment of sixty dollars in the general list is equal to that on twenty-four acres of the best alluvion meadow in the Counties of Hartford or Middlesex: or to that on forty-eight acres of the best meadow land in any part of the State; or to that on one hundred and seventy-five acres of the best wood or timbered land in the vicinity of our navigable waters; or to that on a first rate new brick or stone house containing twelve fire places, in either of our cities; that deducting, according to a moderate estimate, cost of clothing and other necessary personal expenses, the annual contributions of a laboring man without property, are, on a medium calculation for the State, equal to one sixteenth part of his income.

Other taxes, which affect farmers of the middling condition, are not dissimiliar in their operation. Their horses and oxen employed in agriculture cannot be regarded as more eligible objects of taxation than ploughs, harrows, and other instruments of husbandry, the tools of a mechanic or the library of a lawyer, or physician. Though all these articles have an intrinsic value, yet whenever they are sold, they must be immediately replaced. Distinctly considered, they are objects of expense rather than a profit, being merely aids to that skill and industry by which income is accumulated, and without which, neither can be exerted with success.

The same observations are applicable with equal force to the progress of dairies, tillage, and the growth of stock on a farm, so far as these increments are required for the support of a family. The physical wants of persons are so equal that, with the exception of persons reduced to absolute slavery, the consumption of those articles, which constitute the common food of the people, must always be in proportion to the number, rather than the wealth of different families. Hence it has been regarded as an axiom in finance, that taxes levied on the consumption of the necessaries of life are nearly equivalent to uniform taxes on persons without reference to property.

Although the object is of minor importance yet the operation of the assessment on fire places is very unequal. In our climate three fire places are occasionally necessary to the comfortable accommodation of every family. According to our system, the tax is not imposed on the building as an index of the wealth or income of the occupant, but on all fire places whether used or not, and with reference to the condition of the building as being new or decayed. Hence it must frequently happen that the cottage of a man in very moderate circumstances will be subject to a higher assessment than

the ancient but comfortable mansion of his opulent neighbour. The assessment on mills, machinery and manufactures; on commercial investments; on the profits resulting from trades, professions, and employments, and on moneys loaned on interest, are, in my opinion liable to the most decisive objections. Unless they are imposed according to uniform and nearly nominal rates, for the purpose of collecting statistical information, they are necessarily arbitrary and unequal. So far as they have any operation, they tend to depress talents, skill, and industry; they expose individuals to odious investigations and comparisons, and serve to expel capital from the State.

It is an obvious policy of this State, to limit, by all reasonable means, those emigrations which menace our resources. Fortunately for the people, this object can be attained by the alluring influences of interest and affection only. These may be manifested by exonerating industry and skill from partial burdens, and by encouraging the free circulation of capital and credit. In proportion to the improvements in the arts, and the progress of civilization, the interest of the community become involved. Our state of society has already acquired such a degree of maturity, that agriculture, commerce, and the mechanic arts have become mutual supports and dependencies, which must flourish or decay together. Each of these interests is equally affected by those laws by which contracts are formed and adjusted, and to all, an exact adherence to justice, as the only basis of a firm credit are equally essential. Owing to the subdivisions of real property, the farmers, hitherto the most independent class of citizens, cannot pursue their business to advantage, without a pecuniary capital, or an occasional resort to credit. Some estates are best adapted to tillage; others for pasture; and in a third, winter forage is most abundant. Hence arises the necessity for mutual credits, or the use of capital, which may be fairly purchased, but which will retire from the influence of legal coercion.

The Mechanic Arts have sometimes been represented as unfavorable to public morals. If instances can be adduced where artizans have become a degraded class of men, the causes of their depression are to be discovered in political regulations which have restrained their liberty and reduced them to poverty. The nature of their employments manifestly tends to a different result. It is in the work shop that habits of order and attention to the effects of intelligent design are necessarily cultivated; and that fidelity,

economy, and mutual co-operation are discovered to be duties of indispensable obligation.

The freedom with which I have thought it my duty to disclose my sentiments respecting the operation of the existing system of taxation, upon the interests of a great proportion of our constituents, might, if my motives were unexplained, expose me to the effects of impressions, which self respect requires me to obviate. It is now more than twenty years since I presented a Report to the House of Representatives of the United States in which the exhausting effects of unequal systems of taxation in several of the States, especially in New England, were distinctly described. The opinions then expressed were not dissimiliar from those now submitted to your consideration. As the principles of that report were approved by Congress, and as the benefits of the consequent system, in equalizing the public contributions, have since been demonstrated by experience, I consider that I may fairly claim to be exempted from any suspicion of motives arising from my present situation if I earnestly recommend a rule of taxation, which has received the sanction of the United States, to which I would add a few objects of assessment, connected with our local circumstances, as being best adapted to promote the interest of the public.

* * * * *

It is the policy of every wise state to consider well its situation and resources, and by systematical arrangements to acquire and maintain some honourable distinction among its neighbours founded on a principle the least exposed to depression. In whatever relates to education, or the means of unfolding and directing the human faculties, to objects connected with the great interests of society, present and future, this State has nothing to apprehend from external competitions and rivalships. It cannot be a question whether all our existing institutions ought to be maintained, but in what degree and in what manner they can best be invigorated, extended, and directed to new objects of public utility. It is certain that no fame can be so durable as that which would arise from the possession of institutions for the cultivation of the human intellect of acknowledged preëminence; and, in proportion to our success in obtaining this distinction, will be the extension of an influence, more brilliant and useful, than any which can be derived from accumulations of wealth or territorial dominion.

A general view of the circumstances of the State presents subjects for consideration which require grave, united, and patriotic

councils, founded on a just estimate of our situation. In the salubrity of our climate; in the fertility of our soil; in our facilities for external and internal commerce; in the extent and variety of our industry and skill; and in the intellectual endowments and energies of the people, we may securely confide; but we cannot conceal the evidences everywhere present that our wealth has diminished; that commerce has declined; that agriculture languishes; and that the factories, and mechanic arts, from which a great proportion of the people derive their support, are oppressed by the stagnation of markets and the deficiency of an uniform medium of exchange.

Some of these embarrassments are not peculiar to this State, and are owing to the calamitous and impoverished condition of other countries. The redress of others has, very properly, been confided to our national councils, and from the operation of their measures relief is gradually extending among the people. Still much remains to be accomplished by our collective and individual exertions, and much may be hoped from those sanative principles inherent in free governments, which serve to apply the deficiencies, or correct the errors of legislation.

An investigation of the causes which produce the numerous emigrations of our industrious and enterprising young men is by far the most important subject which can engage our attention. We cannot justly repine at any improvements of their condition. They are our relations and friends, who, in the honourable pursuit of comfort and independence, encounter voluntary toils and privations, and the success of their efforts affords a most exhilirating subject for contemplation. Still it is certain that the ardour for emigration may be excessive, and perhaps the time has arrived when it will be wise in those, who meditate removals, to compare the value of what they must relinquish with what they can expect to acquire; and to reflect, that schools, churches, roads, and many other establishments, necessary to the comfort, preservation and dignity of society, are appendages of real property in old states; and that in a comparative estimate the expenses of forming those establishments anew ought to be added to the first cost and other charges incident to new settlements.

On our part it is important to consider whether everything has been done, which is practicable, to render the people contented, industrious, and frugal, and if causes are operating to reduce any

class of citizens to a situation which leaves them no alternative but poverty or emigration, in that case to afford the most speedy relief.

I hope to be excused if I express a decided conviction that the success of the manufacturing establishments of this country is connected with our most essential interests. A state which is dependent on another for clothing, arms, provisions, or the instruments by which they must be procured, cannot be tranquil, and must be insecure. I have no doubt that our advantages and resources for ensuring the complete success of these establishments are superior to those of any other people; and I firmly believe that the embarrassments, under which they labour, are temporary; and that they will diminish under the protection afforded them by the national government, and the operation of powerful causes which are developing in their favour. Still, owing to the stagnation of commerce and exchange, the present is an interesting crisis, and they now need all the patronage which can be afforded them, by government, and public opinion. All of which I venture to recommend at present is, that until our system of revenue can be revised and equalized, that they be exempted from assessments, capitation taxes, and services in the militia; and that as doubts have been excited, whether manufacturing establishments are consistent with the general policy of this State, that this question may be settled by a resolution, expressing the sense of Legislature.

Taxation in 1821

For nearly two centuries previous to the adoption of the Constitution of 1818, Connecticut was under a tax system similar to the one in operation in the Colony of Massachusetts. This was based upon the principle of the income derived from property which was principally land and improvements. Under an act of the General Assembly meadow land was rated from twenty to sixty shillings—house lots fifteen to fifty-five shillings, tilled land from eight to twenty-five, grass land from ten to twenty, and unclassified at one shilling per acre. All male population over sixteen years of age paid a poll tax of two shillings and six-pence. Later this poll tax was based upon property equivalent to eight pounds at the prevail-

ing rate. Certain individuals such as ministers and teachers at Yale College were exempt. With the accumulation of personal property, and the development of trade and industry, changes in the general tax scheme were made. Many of the principles of our present day methods of taxation were developed during this two hundred year period, and the theory of "ability to pay" seems to have been the basis. A person who enjoyed the luxury of two fireplaces paid more than his neighbor who owned only one, and the same distinction was given to the owner of a two-story over a single story house. A penalty was provided for those that failed to disclose their property for taxation purposes. At one time the listers could inflict a fourfold penalty for this offense. Exemptions could be granted to those who were judged unable to pay and interest was charged for overdue accounts.

The framers of the Constitution of 1818 in their great wisdom placed no Constitutional restrictions upon the future, and, like the grantors of the Charter of 1662, left it to posterity to equalize the assessments upon the people for the expenses of the Government by statutory rules and regulations according to the changing condition of society.

The General Assembly of 1821, following the adoption of the new Constitution, passed new legislation to conform to its principles, and a comparison with those measures passed a century since with those under which we operate is very remarkable. The assessors were elected at a town meeting in October. Their qualifications were that they should be judicious electors who should require all persons liable to pay taxes to report the same before a certain date under the penalty of a three-fold rate per cent. The assessors could change the owners' return if deemed ex-

pedient after viewing the premises, or upon other evidence. A board of relief was also elected, consisting of judicious electors, to equalize or adjust the assessment with notice given to the owner of the amounts that were raised. The taxable property was put in the list under statutory provisions:

Dwelling houses with buildings and lots appurtenant thereunto, not exceeding two acres at 2% of their worth in money with due regard to the situation, use and income thereof; other lands at 3% of such values; horses and mules one year old or more at 10%; neat cattle one year old or more 6%; silver plate except spoons 25%; clocks, watches 50%; each coach, chariot, phaeton, coachee, curricle, chair-chaise, gig or sulkey at 25%; vehicles for use on farms or for the transportation of produce to market 15% of their value; stock in any Turnpike Company that nets 6% at 6% of its value.

Mills, stores, distilleries with their improvements shall be valued with respect to situation and present income at 3%.

Bank and insurance, and stock of the United States Bank at 6%.

Polls' exempted of ministers of the Gospel, teachers, students and militia men. Attornies, physicians, surgeons, traders of all kinds, mechanics, taverners, brokers and distillers assessed according to the value and income of their business, occupation or profession, except that attornies, physicians, and mechanics shall not be taxed until two years from the time of commencing such profession or occupation.

The treasurer and comptroller for the time being shall constitute a board of equalization and shall equalize and adjust the assessment list of the several articles of taxable property by extra adding or deducting from the list such sum per cent as in their opinion will equalize the same with the valuations of other towns.

The assessors were paid fifty cents on a thousand dollars of the amount of the assessment list. The process of collections was similar to our present system as operated by the municipalities with the limitation of time for payment; the right of the collector to place liens, and

sell the property under the proper execution. The Statute provided: "There shall be allowed to each collector of the State taxes three and one-half cents on the dollar for all monies such collector shall collect and pay into the treasury besides seven cents per mile for travel, provided such collector shall make a full settlement with the treasurer of all such taxes as by his warrant he was commanded to collect within twenty days after the time limited in such warrant for such collection. Should he neglect to make such settlement according to these provisions, he should receive nothing for the sum he had collected and paid in."

In a footnote of the revision of the Connecticut Statutes of 1821 is the following: "Owing to the extreme scarcity of money in the early times of the Government, taxes were directed to be paid in wheat, peas, rye, Indian corn, pork and beef."

A study of the statutes in regard to taxation for the century just passed is an index of the changes in the economic, industrial, and educational activities of its peoples. Especially is it true of the transportation facilities. The taxation legislation of 1821, following the adoption of the Constitution, made a special class of those who could support a chariot, curricle or chaise, or any luxurious means of transportation, and in sequence taxed improved methods as they came into existence. The stock of any Turnpike Company where the owner received 6 per cent upon the investment paid tribute. A Kingsbury treasurer, in his report to the General Assembly calls attention to the fact that many of the turnpike roads had not made settlements and returns to the treasury office for several years, and annexes a list showing a great many miles of such roads with considerable capital stock:

CONNECTICUT COLONIAL CURRENCY, ORIGINALS IN STATE LIBRARY, HARTFORD.

Hartford and New Haven, Capital Stock	$79,358.00
Waterbury River, Capital Stock	39,535.00
Hartford Bridge, Capital Stock	96,302.00
Talcott Mountain, Capital Stock	13,574.00
Somers and Woodstock, Capital Stock	20,066.00
Middletown, Capital Stock	15,361.00
Norwich and Preston Toll Bridge, Capital Stock	9,667.00
Bridgeport and Newton, Capital Stock	22,915.00

These were only a few for the State was well covered by this system, and these companies provided a means of communication between the towns by the construction of highways and bridges in consideration of the right to collect tolls at toll-gates, and toll bridges. In 1853, the treasurer reports only eight companies were taxed and the income $71.00; in 1863, two companies paid $88.62; and 1873 no record is found.

Then came the era of canal building but with the invention of steam engines this was soon abandoned. Following in rapid succession was the horse-drawn car in the centers of population—discarded for the electric cars—then the self-propelled gasoline vehicle for passengers, express and freight service. In one century a change took place from a few miles of privately owned highways to an elaborate system of town and state-owned roads costing millions of dollars; the building and discarding of waterways; the developing and building of steam roads, which at the present time are not sure of the future; the building and abandonment of miles of electric lines; and the sudden use of the automobile—all of which have played an important part in the financial scheme of Connecticut.

State Tax

The Commonwealth from its earliest history has collected a direct tax from the people by a tax upon the town.

The method made but little difference as both were laid upon the same source. It was based, in principle, upon a fixed rate on the assessed value of the property of the town as made up by the assessors for taxation purposes. This method was inequitable owing to the fact that the assessed values for taxation varied widely in comparison to the actual market value, and also varied widely in the different towns. This condition existed in spite of the fact that in 1851 the General Assembly passed an act that all taxable property should be listed by the assessor at its "present, full fair and just value." The low assessed valuation and a high tax rate raised the same amount of money for the purposes of town expenditures but defeated the equal distribution of the State levy. The Committee, appointed by a special act in 1884, called attention to the fact that when the revenue system then in operation was framed the annual expenditures of the State amounted to about $110,000 and that now the expenditures are about $1,500,000, or more than ten fold, the greater part of which was collected from the Towns. In their report they express the following: "We do not believe that it would be either practicable or desirable to dispense with the direct state tax. The weight of it comes home to every taxpayer in an increase of his town rate which he cannot fail to feel, and makes the whole community watchful of any unnecessary appropriations from the public treasury. If all the revenue of the State was derived from corporations, or other sources not directly affecting the individual taxpayer, it would be apt to be expended with less thought and care. Nor do we think that any fairer mode of supporting the State Government could be devised than that of dividing the burden between its incorporated bodies and its individual citizens

in due proportion to the benefits and protection which it gives to each."

The question of equalizing the involuntary contribution of the property owners for state expenses has ever been a perplexing question. The session of the General Assembly of 1819 partially changed the principle of taxing on the basis of income to that of a property tax. At the session following an attempt was made to find some way to equalize this burden and a Board of Equalization was created consisting of the treasurer and comptroller, aided the first year by a special tax commission in each county, with substantially the same powers as our present board. This board was never particularly active, and a special committee appointed by the Legislature of 1844 recommended that it be abolished. "The committee proposes to dispense with the Board of Equalization. As now constructed such a board cannot perform any effectual service. If all our taxes were levied by the State, it would be absolutely necessary to provide for a general equalization of assessments; but as the state tax is quite inconsiderable compared with those of the separate town, inequalities in the assessment will be of small importance."

In 1866 an attempt was made to make this board more competent to deal with this question by adding to its members one "Commissioner" for each Senatorial District at a compensation of $3.00 per day with expenses. It was the duty of each of these commissioners to go over the grand list of each town with the first assessor, or to examine the property assessed himself, "collecting facts which shall enable him to make a report to the Board of Equalization, constituted by this Act, of the relative value of the same kind of property in the different towns."

This act was replaced in 1867 by one requiring each

commissioner of equalization to examine, with one of the selectmen in each town, "a sufficient number of homesteads known as village property and not less than ten farms situated in different localities in such town, together with enough of other taxable property to ascertain the actual cash value thereof and to prepare a table showing the actual as compared with the assessed value of the different kinds of taxable property."

The same year the State Board of Equalization was reconstituted by dropping the district commissioners and the commissioner of the school fund. In 1868, a special commission was created stating one of the reasons for its appointment that "it is believed a large amount of personal property legally and justly liable to taxation is withheld from and not placed upon the tax list and that real estate and personal property are not now assessed at their true value." In their report in the following year, they speak of the inequalities of the assessments and make the statement as follows: "One of the obvious and peculiar defects of our system is that it has no central control or supervisory head, by which to secure any sort of uniformity in the manner or efficiency of its administration. It rests solely upon the interested action and determination of more than one hundred and sixty separate local boards of officers, all acting without concert, conference or any common control or supervision, and all alike interested as well as their constituents by the strongest pecuniary inducements in the undervaluation and concealment of the taxable resources of their respective towns in order to evade and reduce their respective state tax apportionments."

In order to overcome the difficulty they recommended the appointment of a tax commissioner who was to hold

office for five years and should make a general revaluation of all the taxable property in each town; this to be done by state assessors, one to be appointed by him from each county. This did not meet with the approval of the Legislature, and a bill to create a tax commissioner in the Legislature in 1876 met the same fate. In 1881, a committee composed of the state treasurer, comptroller, secretary and commissioner of the school fund reported the conditions and working of the tax laws: "In view of the gross inequalities of our valuation, of the imperfections of our statutes relating to boards of equalization, of the excessive taxes now bearing upon some persons, natural and artificial, we earnestly recommend the immediate appointment of a wise and competent commissioner to prepare in detail for the consideration of the next Legislature a complete and perfect tax-law in place of our present legislation which, with many merits and demerits, is quite like a piece of patchwork." "Possibly the Legislature may be inclined to make a fundamental change and adopt a system of taxation upon a basis radically new, embodying the theories of men who have made taxation the study of a life-time. This may remedy the evils complained of by taxpayers everywhere. But should they prefer a temporary expedient, and retain the loose system now in the statutes with the cherished traditions of the people and the experience of many years, in that case we earnestly recommend the appointment of a tax commissioner." This proposition like those proposed in previous years also failed of favorable consideration.

Another element that entered into the injustice of levying a flat rate upon the assessment lists was the change in the method of taxing the shares of the capital stock of the banks and insurance companies. When this kind of

property was valued by local assessors and put in the grand lists of the towns the difference in the value and in the rate of taxation made a wide fluctuation in the net return to owners of this stock in the different towns. In order to correct this, the Board of Equalization was authorized to put a value upon the different shares of stock. The companies were required to furnish a list of their stockholders, with their addresses, to the state treasurer and also to pay into the state treasury a tax of one per cent upon the value so fixed, the State to retain the amount paid in upon the stock held by non-residents. At the time this proposition was advanced it was expected that the companies would reduce their dividends by the one per cent tax, and in a few cases, this was done at first but was soon forgotten, and the regular dividends paid. It was also understood that the value of these stocks was to be added to the grand lists of the towns where the ownership was vested for the purpose of state taxes. This was also soon forgotten, thus relieving some towns of their equitable share of state levy.

It can be seen that through all the years following the adoption of the present Constitution attempts have been constantly made to impose upon the inhabitants an equitable proportion of the cost of State Government, and had a greater bearing in the period when the functions of the State were mainly financed by this direct tax.

In 1911, a new method was suggested whereby the amount to be raised should be fixed and laid upon the towns in the proportion to the average yearly amount they had received from direct taxation during the three years next preceding, this amount to include the receipts of all taxing subdivisions of the towns; the average of three years being used so that a town would not be penalized

if an extra tax was laid in any year for some special purpose. This was an innovation in Connecticut taxation and failed of passage, but as the other methods used for a century did not seem to be ideal, when it was again proposed in 1915, it was adopted.

The first six years following its adoption, the amount was fixed at $1,750,000 annually. In 1922 to 1923, it was increased to $2,000,000—$500,000 of which was deposited in the sinking fund to be used in paying off the funded debt maturing in 1935 to 1936. For the years of 1924 to 1925 it was decreased to $1,500,000, no further deposit being necessary in the sinking fund.

Thus it appears that it took a century to develop a method that seems at present to place this burden justly and fairly upon the inhabitants.

The School Fund

Section II of Article eight of the Constitution of 1818 reads as follows:

> The fund called a "School Fund" shall remain a perpetual Fund, the interest of which shall be inviolably appropriated to the support and encouragement of the public or common schools throughout the State and for equal benefit of all the people thereof. The value and amount of said fund shall, as soon as practicable be ascertained in such manner as the General Assembly may prescribe, published, and recorded in the comptroller's office; and no law shall ever be made authorizing said fund to be diverted to any other use than the encouragement and support of public or common schools among the several school societies as justice and equity shall require.

The Charter of Connecticut given by Charles II, King of England, in 1662 conveyed to the "Governour and Company of the English Colony of Connecticut in New England in America, all that part of . . . New England

. . . bounded on the East by Norrogancett River, commonly called Norrogancett Bay, where the said River falleth into the Sea, and on the North by the lyne of the Massachusetts Plantation, and on the South by the Sea, and in longitude as the lyne of the Massachusetts Colony, runinge from East to West, that is to say, from the said Narrogancett Bay on the East to the South Sea on the West parte."

The territory included in these boundaries comprised parts of Rhode Island, New York and New Jersey, and all of Long Island, westward to the Pacific Ocean. As charters had already been granted which covered a considerable portion of this same territory boundary lines were settled by mutual agreement between the Eastern States. All of the land west of the Delaware River was granted for the first time to the Connecticut Colony. In 1661 Charles II gave to William Penn the Charter of Pennsylvania, covering the present territory of that State, the northern part of which had already been granted to Connecticut. Settlements were made under the authority and jurisdiction of Connecticut who claimed it under the terms of the Royal Charter. For some years the settlers on the Susquehanna sent their representatives to the General Assembly of Connecticut, paid taxes, established schools and were governed the same as any citizen of this State. The controversy between Pennsylvania and Connecticut was finally settled by a Committee appointed by Congress who decided that this territory rightfully belonged to Pennsylvania.

The ownership of the lands west of Pennsylvania was never disputed and Governor Jonathan Trumbull, acting under an order of the Legislature, issued a proclamation forbidding all persons to settle on the territory without

permission from the proper authority in Connecticut. The part of the grant now left was a strip about seventy miles in width, extending westerly from the Pennsylvania line to the Pacific Ocean. In 1786 the General Assembly at the suggestion of Congress authorized the delegates in Congress from Connecticut, or any two of them, to deed to the United States all the lands belonging to this State lying west of a line parallel to and one hundred miles distant from the western line of the State of Pennsylvania. This land about seventy miles in width and one hundred miles in length was known as the Western Reserve, or New Connecticut.

An act of the General Assembly in 1795 created the Connecticut School Fund. A committee was appointed to dispose of the land, who were authorized to dispose of it to one or more parties as this committee should deem most beneficial to the State, but not to make any contracts for the sale of part of the land until the combined contracts would dispose of the entire tract. They were to obtain not less than $1,000,000 in specie. If the time of payment was extended, the principal should be at least $1,000,000 plus the additional interest, and time for payment should not be extended beyond ten years. In October, 1795, the committee reported to the Legislature that the sale of the entire tract had been contracted for in thirty-six parcels for the total sum of $1,200,000 payable in five years with interest after two years. The largest amount covered by any one deed was $168.185; the smallest $1,683. The General Assembly accepted this report and ordered the committee to deed the lands according to the contracts. The value and amount of this fund as determined under the provisions of the Constitution of 1818 was found in 1820 to be $1,858,074.33. In

1920, one hundred years later, it was estimated at $2,019,170.31.

During the first few years following the conversion of the property into income bearing funds the income was divided among the school societies according to their respective "lists of polls and saleable estate." This method of distribution gave the wealthier societies some advantage over the poorer ones. In 1820 a change in the law fixed as a basis the number of children enumerated between the ages of four and sixteen years of age residing in the several societies. This basis adopted at that time is still in force. The amount of income distributed to the communities for each child enumerated varied according to the amount realized, it being eighty-five cents during the earlier years, advanced to one dollar in 1835, and to one dollar and fifty cents in 1850. As the population of the State increased rapidly from 1850, the number of children enumerated increased in the same proportion so that the return per child necessarily decreased, dropping back to one dollar and forty cents in 1851, to one dollar and twenty-five cents in 1860, and to one dollar from 1869 to 1876. In 1897 the General Statutes were amended so that the town received two dollars and twenty-five cents per child enumerated, the difference between this amount and the income from the school fund being paid out of the general receipts of the state treasury. The estimated value of the principal of the fund in 1820 was $1,858,074.33, which had increased in 1847 to $2,077,641.19, the highest amount ever reached according to the inventoried value. In 1920, one hundred years from its origin, it was estimated at $2,019,170.31, and in 1924 at $2,022,891.81. These present estimates are probably conservative as in its holding are a number of bank

FRANK CHESTER SUMNER

The well known banker of Hartford, was born in Collinsville June 8, 1850 and died in Hartford December 9, 1924. He became a messenger of the Hartford Trust Company February 1, 1870 and rose steadily from one position to another until he was treasurer in 1886 and president in 1917, a position he continued to hold until its merger in The Hartford-Connecticut Trust Company of which reorganization he was made the head. Mr. Sumner served in the Hartford common council in 1873 and was a member of the Connecticut-Massachusetts Boundary Commission in 1905. For thirty-one years he was a valued member of the board of directors of the State Prison. He was also an active member of the commission that built the new stone bridge across the Connecticut at Hartford and a trustee of Trinity College which honored him with a degree. His will provided that at the death of his widow his millions should go to the Hartford Hospital, Trinity College and the Wadsworth Atheneum.

BACHRACH PHOTO

"The States History Co, Inc."

Frank C. Sumner

stocks carried at the original cost that have a market value considerable in excess of this book value.

An appraisal of the mortgages had been made at about this date to ascertain if the amounts complied with the provisions of the law. On June 30, 1925, the principal of the fund was invested as follows:

BONDS, NOTES AND MORTGAGES	
In Connecticut and Ohio	$1,485,000.00
REAL ESTATE	
By Foreclosure	500.00
BANK STOCKS	
In six Connecticut Banks	93,012.61
U. S. Government Bonds	374,945.63
CASH	
State Treasury	69,433.57
	$2,022,891.81

The principal has earned, during the one hundred and twenty-seven years of its existence, the enormous amount of $12,798,893.33, nearly seven times the orginal principal, which has been distributed throughout the State for educational purposes. The principal has also increased about 10 per cent during that time. In addition to the amounts received from the income of the school fund the State has provided for the maintenance of the common schools in the various towns. From 1767 until the adoption of the present Constitution there was a state tax of forty shillings, for the support of schools, on each one thousand pounds. In 1821, a statute was passed providing "A sum equal to two dollars upon every thousand dollars of the amount of assessment lists is hereby annually ap-

propriated out of the monies arising from the state tax to be applied for the use and benefit of common schools in this State. Provided, that whenever in any year, the amount of interest arising from the school fund shall exceed $62,000.00, the amount of such excess shall for the year so far diminish the sum hereby appropriated from the avails of the state tax." This provision continued in effect until 1854, when each town was required annually to raise by taxation a sum equal to one cent on the dollar of their grand lists for the support of schools. An act in 1820 provided that "whenever the expense of keeping a school by an instructor approved according to law shall exceed the amount of all public money appropriated—shall appropriate such deficiency among the proprietors of such school according to the number of days that any person or persons may have sent any scholars to school." It was also provided "that all inhabitants living within the limits of ecclesiastical societies incorporated by law shall constitute school societies;" the monies raised by taxation to be distributed annually to them. In 1856 these school societies were abolished and a change in the method of assessment went into effect in 1860, which provided that all taxable property should be listed by the assessors at its "present full, fair and just value" and the tax rate for school purposes was fixed at three-tenths of a mill on the dollar; in 1866 at four-tenths; and in 1868 at not less than one mill on the dollar. In 1869 the method was changed to such rate which in addition to other funds was sufficient to maintain at least thirty weeks of school in districts which enumerated twenty-four children or more between the ages of four and sixteen years of age, and in the other districts twenty-four weeks.

The State has also made grants to the towns at various

times to supplement the cost of the public schools, the policy being to give the greater assistance to the smaller townships. An average attendance law was passed in 1903. Under the provisions of this act thirty-nine towns received additional state aid to the amount of $36,326.05; the distribution varying according to the amount of the grand list. This form of grant has expanded so that in 1923 eighty-six towns came under its provisions and the cost to the State amounted to $357,500.10. An act of the General Assembly of 1911, which remained in force until 1917, gives an idea of the policy of the State toward the towns. In order to take advantage of the grant provided for in this act, a town having a valuation of less than $500,000.00 was required to expend at least two and a half mills upon the dollar of its assessment for school purposes. Those having a grand list of $500,000 to $1,000,000 to expend three mills, those having $1,000,000 to $1,500,000—three and one-half mills; $1,500,000 to $2,000,000—four and one-half mills; $2,000,000 to $2,500,000—six mills, the latter sum being the maximum amount that could receive state aid. In 1917 the system of apportionment was changed so that towns under its provision were reimbursed for a percentage of the money spent for teachers' salaries. This provided that towns having a grant list of $500,000 or less should be reimbursed to the extent of sixty per cent of the amount expended for teachers' wages; those whose grand lists are $500,000 to $1,000,000 forty-five per cent; those from $1,000,000 to $1,500,000 thirty per cent; those from $1,5000,000 to $2,000,000 twenty-five per cent; those from $2,000,000 to $2,500,000 ten per cent. In addition to the direct reimbursement to towns for school expense the State assists students from the smaller towns to at-

tend high schools by the payment of tuition and transportation. It also provides supervision for the smaller towns by grouping them together where it would not be efficient or economic for single towns to attempt this service. Addition has been made of departments of americanization, vocational, physical and special education. These expenditures by the State combined with expenses by the State Board of Education, the normal schools and trade schools involve at the present time about $2,500,000 annually.

Town Deposit Fund

When the 24th Congress met in 1835 the national debt had been paid in full and there was a considerable balance in the treasury. On June 23rd, 1836, Congress passed an act disposing of the surplus revenue. It provided that all moneys in the treasury on the first day of January 1837 in excess of a reserve of $5,000,000 should be "deposited" with the several states in proportion to their respective representation in the Senate and House of Representatives. The amount for distribution was $37,468,-859.97. At this time there were fifty-two Senators and two hundred and forty-two Representatives, and Connecticut having two Senators and six Representatives, its share was eight two hundred ninety-fourths of the whole sum, or a little over one million dollars. The Act provided that the money should be paid in four equal instalments on the first days of January, April, July and October of 1837. The first three were deposited according to the provisions of the act, but a change in the financial condition of the country led Congress to amend this Act on October 2, 1837, deferring the fourth payment until January 1, 1839. This final payment has never been paid. The three payments to Connecticut amounted to $764,-

670.60. This amount was received with the provision of Congress that it might at any time be recalled into the nation's treasury. This action has never been taken, and there is very little reason to think that at the time the distribution was made it was the expectation or intention that it ever would be, but was rather in the nature of a gift to the State. During the World War, when the finances of the Government were severely taxed, it was suggested that these amounts be recalled which moved some of the towns to ascertain what had become of these funds.

The General Assembly of Connecticut at a special session held in December 1836 accepted the deposit and made the following provisions:

"The money which shall thus be received from the United States . . . shall be deposited with the several towns in the State in proportion to their respective population as ascertained by the United States census of 1830, and shall be repaid into the state treasury whenever thereof shall be required by an act of the General Assembly, or by proclamation of the person administering the office of Governor for the purpose of being paid into the treasury of the United States." The towns received their proportionate share upon the following conditions:

1st. That such town keep and preserve the money as a deposit and in trust for the State.

2nd. That it appropriate at least one-half of the entire income or interest thereof annually, for the promotion of education in the common schools in such towns . . . and the remainder for the purpose of defraying the ordinary expenses of the towns.

3rd. That it make good each and every deficiency in

the amount received should any loss occur through mismanagement or other cause.

4th. That it repay into the state treasury the whole amount or any such part as should be required whenever the same shall be called for in the manner specified in the Act.

Provision was also made to apportion the amount when towns were divided. In 1855, the conditions prescribed in the second clause of the act were changed so that the entire income was to be expended for the public schools.

A resolution of the General Assembly passed in January, 1895, instructed the comptroller to inquire and report concerning the town deposit fund. Acting under this authority a report was received from each town showing the amount of the fund on January 1, 1896, and in what manner it was invested. The total fund on January 1, 1847 amounted to $764,979.66 and on January 1, 1896, it amounted to $754,972.34, showing a loss of a little over $10,000. The great majority of towns reported that the funds had been loaned to the town itself, which probably means that they had been used for current expense. Some towns issued a note, or town or school order, to cover the amount. Some had invested it in real estate, mortgages, bank stock, or deposited it in savings banks. The following are some of the replies returned to the questionnaire: Invested in public buildings; in almshouse property; has been used to pay current expenses of town; has been used by towns; loaned to towns; deposited in savings banks; remainder in bank stocks and mortgages which are much depreciated in value. The following table taken from Bradley's "Connecticut Register" gives the amounts deposited with each town in 1847:

HARTFORD COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
Hartford	9,789	....	$25,141.43
W. Hartford	....	1854	.....
Avon	1,025	....	2,632.54
Berlin	3,037	....	7,800.04
New Britain	....	1850	.....
Bristol	1,707	....	4,384.16
Burlington	1,301	....	3,341.41
Canton	1,437	....	3,690.71
E. Hartford	2,237	....	5,745.48
E. Windsor	3,536	....	9,081.64
S. Windsor	....	1845	.....
Enfield	2,129	....	5,467.99
Farmington	1,901	....	4,882.41
Plainville	....	1869	.....
Glastonbury	2,980	....	7,653.63
Granby	2,733	....	7,019.26
E. Granby	....	1858	.....
Hartland	1,221	....	3,135.94
Manchester	1,576	....	4,047.70
Marlborough	704	....	1,808.12
Simsbury	2,221	....	5,704.27
Southington	1,844	....	3,736.02
Suffield	2,690	....	6,908.82
Wethersfield	3,853	....	6,792.59
Rocky Hill	....	1843	2,953.20
Newington	....	1871	.....
Windsor	3,220	....	5,231.71
Bloomfield	....	1835	3,038.34
Windsor L'ks	....	1854	.....
TOTALS	51,141		$130,197.41

NEW HAVEN COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
New Haven	10,678	....	$27,424.67
Branford	2,332	....	3,184.73
N. Branford	....	1831	2,804.64
Chesire	1,780	....	4,571.63
Derby	2,253	....	5,806.46
Seymour	....	1850	.....
E. Haven	1,229	....	3,156.49
Guilford	2,344	....	6,020.19
Hamden	1,666	....	4,278.85
Madison	1,809	....	4,646.13
Meriden	1,708	....	4,386.72
Middlebury	816	....	2,095.77
Milford	2,256	....	5,794.17
N. Haven	1,284	....	3,292.62
Orange	1,341	....	4,592.92
Oxford	1,763	....	4,527.98

Prospect	651	....	1,671.99
Southbury	1,557	....	3,998.91
Wallingford	2,418	....	6,210.23
Waterbury	3,070	....	7,884.78
Naugatuck	....	1844	.....
Wolcott	843	....	2,165.11
Woodbridge	2,052	....	2,493.86
Bethany	....	1832	2,876.38
Beacon Falls	....	1871	.....
TOTALS	43,850		$113,885.23

NEW LONDON COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
New London	4,356	....	$11,187.67
Norwich	5,179	....	13,301.41
Bozrah	1,079	....	2,771.87
Colchester	2,073	....	5,324.16
Franklin	1,194	....	3,066.60
Sprague	....	1861	.....
Griswold	2,212	....	5,681.17
Groton	4,805	....	6,839.48
Ledyard	....	1836	5,501.37
Lebanon	2,555	....	6,562.09
Lisbon	1,166	....	2,994.68
Lyme	4,092	....	7,636.69
E. Lyme	....	1839	3,451.29
Old Lyme	....	1855	.....
Montville	1,972	....	5,064.77
N. Stonington	2,840	....	7,294.07
Preston	1,935	....	4,969.72
Salem	959	....	2,463.04
Stonington	3,401	....	8,734.96
Waterford	2,477	....	5,783.44
TOTALS	42,295		$108,628.48

FAIRFIELD

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
Bridgeport	2,800	....	$7,191.33
Danbury	4,311	....	11,072.09
Bethel	....	1855	.....
Brookfield	1,255	....	3,223.26
Darien	1,212	....	3,112.84
Fairfield	4,226	....	7,697.32
Westport	....	1835	5,609.22
Greenwich	3,801	....	9,762.24
Huntington	1,371	....	3,521.19
Monroe	1,522	....	3,909.02
New Canaan	1,830	....	4,690.05
New Fairfield	939	....	2,411.68
Newtown	3,096	....	7,951.57

Norwalk	3,792	....	7,877.09
Reading	1,686	....	4,330.20
Ridgefield	2,305	....	5,920.01
Sherman	947	....	2,432.23
Stamford	3,707	....	9,520.83
Stratford	1,814	....	4,658.97
Trumbull	1,242	....	3,199.88
Weston	2,997	....	7,106.59
Easton	....	1845	.....
Wilton	2,097	....	5,385.81
TOTALS	46,950		$120,583.42

LITCHFIELD COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
Litchfield	4,456	....	$11,444.70
Morris	....	1859	.....
Barkhamsted	1,715	....	4,404.69
Bethlehem	906	....	2,326.92
Canaan	2,301	....	5,909.74
N. Canaan	....	1858	.....
Colebrook	1,332	....	3,421.04
Cornwall	1,714	....	4,402.14
Goshen	1,734	....	4,453.50
Harwinton	1,516	....	3,893.60
Kent	2,001	....	5,139.24
New Hartford	1,766	....	4,535.68
New Milford	3,979	....	10,219.41
Bridgewater	....	1856	.....
Norfolk	1,485	....	3,813.98
Plymouth	2,064	....	5,301.05
Thomaston	....	1875	.....
Roxbury	1,122	....	2,881.69
Salisbury	2,580	....	6,626.22
Sharon	2,615	....	6,716.19
Torrington	1,651	....	4,240.33
Warren	986	....	2,532.38
Washington	1,621	....	4,163.28
Watertown	1,500	....	3,852.50
Winchester	1,766	....	4,575.68
Woodbury	2,045	....	5,252.24
TOTALS	42,855		$110,106.20

TOLLAND COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
Tolland	1,698	....	$4,361.04
Bolton	744	....	1,910.85
Columbia	962	....	2,470.75
Coventry	2,119	....	5,442.31
Ellington	1,455	....	3,736.93
Hebron	1,937	....	4,974.88
Andover	....	1848	.....

Mansfield	2,661	....	6,734.34
Somers	1,429	....	3,670.16
Stafford	2,515	....	6,459.36
Union	711	....	1,826.10
Vernon	1,164	....	2,989.56
Willington	1,305	....	3,351.67
TOTALS	18,700		$47,927.95

WINDHAM COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
Brooklyn	1,451	....	$3,726.66
Ashford	2,661	....	6,834.34
Eastford	....	1847	.....
Canterbury	1,880	....	4,828.87
Chaplin	807	....	2,072.66
Hampton	1,101	....	2,827.74
Killingly	3,257	....	8,365.08
Putnam	....	1855	.....
Plainfield	2,289	....	5,878.93
Pomfret	1,978	....	5,380.17
Sterling	1,240	....	3,184.73
Thompson	3,380	....	8,680.97
Voluntown	1,304	....	3,349.12
Windham	2,812	....	7,222.86
Scotland	....	1857	.....
Woodstock	2,917	....	7,491.84
TOTALS	27,077		$69,843.97

MIDDLESEX COUNTY

Towns	*Population, 1830*	*Date of Formation*	*Town Deposit Fund, Jan. 1847*
Middletown	6,892	....	$17,700.97
Cromwell	....	1851	.....
Middlefield	....	1866	.....
Haddam	3,025	....	7,769.21
Chatham	3,646	....	4,606.31
Portland	....	1841	4,606.31
Durham	1,116	....	2,866.27
E. Haddam	2,664	....	6,993.58
Killingworth	2,484	....	6,376.75
Clinton	....	1838	.....
Saybrook	5,018	....	7,617.32
Chester	....	1836	2,224.18
Westbrook	....	1840	3,046.40
Old Sayb'k	....	1852	.....
Essex	....	1854	.....
TOTALS	24,845		$63,807.30

Board of Equalization

The adoption of the Constitution of 1818 changed the principle of taxing incomes to that of taxing property and immediately the problem of the equal valuation of property for taxation purposes arose. In 1820 a Board of Equalization was created and has continued since that time in different form as to membership, but ever having in view the equalizing of the tax burden. With the present system of school and highway grants, which are based upon the amount of the grand lists, the theory of legislation being that the smaller towns shall receive the larger proportion, it is the duty of the Board of Equalization to fix the amounts of such lists. It is also the duty of the board to fix the taxable value of shares of bank stocks and insurance company stocks based upon their market value. The board consists of the state treasurer, state comptroller and tax commissioner.

Board of Control

An Act was passed in 1897, creating the Board of Control consisting of the Governor, the treasurer and the comptroller and later the attorney general was added, "who shall whenever in their judgment the interests of the State require, have power to increase a specific appropriation made by the General Assembly, whenever such appropriation shall have proved to have been insufficient to equal the expense incurred under existing statutes authorizing said expense and whenever the specific appropriation for any object shall have been exhausted, provided that no increase of any appropriation shall be made without the written consent of each member of said board and only for expenditures authorized by ex-

isting law. Whenever any appropriation shall have been increased by the Board of Control, the same shall be considered as having been made by the General Assembly."

Various duties have been added since its creation. At the present time, no employee can be added or salary increased without the sanction of this board. It has the power to adjust and compromise certain claims against the State, can authorize transfer of funds between different items of the same department, and has the custody of the fund, the income from which is used for soldier relief. The General Assembly appropriates a specific amount that can be used for additions, the amount for the present biennial period being $300,000. Although this board is authorized to perform functions similar to legislative action it is limited to activities prescribed by law and cannot finance any new projects. With the long periods between biennial sessions it is in the nature of an emergency board and can perform duties that arise without which it might be necessary to call a special session of the Legislature.

Board of Finance

The first attempt to operate the finances of the State under a budget system was suggested by Governor Marcus Holcomb in 1915. The appropriations made by the General Assembly for the maintenance of the departments and institutions had been passed upon in separate bills without much reference to the total amount appropriated, or to the probable income of the State, available during the period covered. With the increasing activities of the State through the greater number of state institutions and departments, it became almost impossible for the appropriation committee of the General

Assembly to consider and pass upon all of these varied items within the Constitutional limit set its session of the General Assembly. An act passed in 1915 provided for the creation of a commission to be known as the State Board of Finance which was to consist of the state treasurer, the state comptroller, the tax commissioner, and three members to be appointed by the Governor. The personnel of this board was made up with the idea of considering both the receipts and expenditures, the state officers to pay particular attention to the receipts and the organization for making payments from State funds, and the citizen members to make a study of the needs of the money spending agencies of the State. Under the present system of biennial sessions, which necessitates the appropriation being made for a period considerable in the future and the same condition existing in regard to the estimated receipts, it has not been possible to work out a balanced budget, but the information obtained by the Board of Finance is a working basis for the General Assembly through its appropriation committee.

The appointed members under the provisions of the act were appointed for five years, three years, and one year respectively, and thereafter for six years so that at all times the board would have the benefit of some previous experience. The measure as first passed reduced the customary membership of the appropriation committee of the House to five and the Senate members to two, and gave the members of the Board of Finance a vote in the appropriation committee. It was ruled by the Attorney General that this provision was unconstitutional. The smaller number of House members also weakened the appropriation in the House in case of contests on the floor of that body, so the law was changed re-

storing the regular number of House members to the committee and retaining the members of the Board of Finance in an advisory capacity. The duties of the board as originally outlined were to obtain from every department and institution detailed estimates of their expenses for the next biennial period, and also their need for extension or construction program. The board tabulated these requests and, after holding hearings on them, presented them to the General Assembly in a report which, in addition to these requests, gives the amounts appropriated for the same purposes for the previous fiscal period, the amounts actually expended during the first year of the period, and their recommendations for the next fiscal period. The report also contains an estimate of the receipts that would be available based upon the experience of the past. Although these are only estimates, both as to receipts and expenditures, they are a basis and guide for the finance committee, in regard to new taxation measures and to the appropriation committee concerning the amount that can be recommended for expenditures. When this commission was created, the fiscal year of the State ended Sept. 30th, which required these estimates to be made nearly a year in advance of the beginning of the new fiscal period, and nearly three years before its termination. The fiscal year was later changed to begin on July 1st, which brings it a little nearer to the time the estimates are considered.

The sources of State revenue are so varied under our scheme of taxation that it is almost impossible to operate under a balanced budget system similar to the municipalities of the State where the income can be closely determined, the principal source being from a tax rate laid upon the assessment list.

Another duty of this board is to recommend to the Board of Control transfers from one specific appropriation to another, provided it is in the same department. The fixing of salaries of those performing services to the State has been a bone of contention for many years and it has seemed to be almost impossible to adjust them with equity. In the session of 1921, disagreeing action between the House and Senate brought an act providing that no salary of any officer or employee of the State could be increased except upon favorable action by the Board of Control upon recommendation of the Board of Finance. The original act provided that increases might be made to those fixed by statute, but the session of 1923 changed the act so that these could be changed only by an act of the General Assembly. It also has the power to temporarily suspend payments from appropriations when it is satisfied that the money is not being expended according to the intent of the Legislature.

Tax on Savings Banks

It seems somewhat strange that almost the first source of revenue aside from the tax upon towns, which was a tax upon the real estate and personal property, should be upon the savings of the people. It is possible that this was a tangible source and easy of collection. In 1852 the deposits of thirty-four banks amounted to $6,965,762.42, upon which a tax of one-eighth of one per cent amounted to $8,707.19. This was the largest direct tax with the exception of that collected from the railroads. The largest amount was collected from the Society of Savings, Hartford, amounting to $2,410.16. The Norwich Bank paid $1,393.96, the Middletown Savings Bank, $1,217.58 and the New Haven Savings Bank $1,081.91.

The smallest amounts were paid by the West Winsted Savings Bank of $2.10, the Mechanics' of Bridgeport $9.48 and the Farmington Savings Bank $10.10.

Ten years later, in 1863, the number had increased to sixty-four, which included some building and loan associations, the tax being $110,576.63, the rate, one-half of one per cent on and over $22,000,000.00. The Society for Savings paid the largest amount, $20,939.66, the Norwich Savings Society being second with a payment of $16,238.83, and Plymouth the smallest of $28.52.

In 1873 the deposits had increased to over $62,000,000 in the seventy-two institutions and the rate of three-quarters on one per cent yielded $471,222.90. In 1883, the increase had not kept the ratio of former ten-year periods and the $70,000,000 at the rate of one-quarter of one per cent yielded $174,076.31 from the eighty-two institutions. In 1893, the deposits in eighty-five banks had increased to $123,000,000 and one-quarter of one per cent yielded $308,000.

In 1903, eighty-four banks with $190,000,000, less certain deductions provided for by law, at one-quarter of one per cent yielded $430,810.00. In 1913 the deposits of the Mutual Savings Banks had increased to $286,700,000, and savings deposits in trust companies brought up the total to $294,600,000 which yielded $687,600.00. For the year ending June 30, 1924, the total amount received from the tax on the savings deposits of the Mutual Savings Banks, the trust companies, and the national banks amounted to $1,028,067.

With the exception of the railroads, no other class of corporations has contributed so much toward the expenses of the Government and, in addition, they also pay a con-

siderable portion of the examinations made by the State of their own institutions.

Transportation Taxes

The capital stock of transportation companies has been a source of taxation from their existence, the turnpike, bridge, canal, steam and street railways following in succession. The first tax upon steam railroads was laid upon the stock of non-residents in 1849 at the rate of one-half of one per cent upon its market value. The same rate prevailed against non-resident owners of the stock of bridges and turnpike companies. In 1852 eight of these later companies paid $71.00 into the state treasury. In 1862 only two companies paid a tax, one being the Hartford Bridge Company, whose shares were valued at $150.00 per share; the non-resident shares paid $86.62. The Derby Turnpike Company paid $2.00 on shares valued at $50.00 each. This class of companies soon disappeared from the list.

The early basis of railroad taxation was the value of their stocks, bonds and floating indebtedness, which principle continued until 1915, when the method was changed to the gross earnings basis. In 1852, there were five hundred and thirty-five miles of the eleven steam roads in the State with a capital stock of about $15,000,000, which paid $29,372.00 to the State at the rate of one-third of one per cent on their market value. In 1863, ten steam roads and one horse railroad, the Fairhaven and Westville, paid $49,669.72 at the rate of three-quarters of one per cent. In 1863, the State received $339,620.00 from twenty-three roads and the Treasurer reports that the Shepaug Valley Railroad Company, The Connecticut Western Railroad Company and the New

Haven, Middletown and Willimantic Railroad were financially embarrassed and unable to pay their taxes amounting to a little over $71,000.00. In 1883, thirty-four roads paid $484,732.00 with $130,000.00 unpaid. In 1893, thirty-six roads paid $772,820.00. In 1903, fifteen steam roads paid $1,032,000, of which the New York, New Haven paid $807,000.00, the thirty-seven street railways paying $252,139.00. In 1913 the number of steam railroads had dwindled to five in number, paying $1,055,000, the New York, New Haven paying $974,000.00. Thirteen street railways paid $555,750.00, the Connecticut Company and the Connecticut Railway and Lighting Company paying $498,800.00 of this amount. The rate during the greater part of this time was one per cent on the market value of their obligations. With the consolidation of these companies came a very complicated computation of stocks and bonds outstanding through the interchange of securities and many exemptions.

In 1915 the system of taxation was changed to the gross earnings basis, the steam roads being taxed at the rate of three and one-half per cent of their gross earnings, and the street railways at four and one-half per cent. The largest tax paid by the steam roads under the former system was in 1910, when they paid $1,542,329.45. Under the gross earnings basis in 1922 they paid $1,847,258.64. The street railways in 1913 paid $555,750.79. The automobile, the jitneys, and bus lines reduced the income of the street railways so that for several years they were unable to pay their full taxes. The General Assembly deferred the payment and also gave the companies other forms of relief in order that the same policy could be continued. These back taxes amounted to several millions of dollars but have been materially re-

duced since; during the year ending June 30, 1924, over $800,000.00 of these back taxes were paid.

Investment Tax

The State has been collecting an investment tax or a tax upon choses in action since 1890. The provisions of this act allow the holder of an evidence of indebtedness including taxable bonds, notes, certificates of deposit, etc., to register them with the state treasurer before the date for filing assessment lists in the town where the owner resides, and pay a tax upon their face value which shall be in lieu of all local taxes. The rate from 1890 to 1896 was two mills, and the first year under the operation of the tax brought in $189,452.06, which was the largest amount under this rate. As there was no way to ascertain the amounts taxable it diminished in 1896 to $44,543.84 when the rate was increased to four mills where it still remains. This new rate increased the amount collected to $140,000.00 in 1903, and to about $180.000.00 in 1913, but the same condition prevailed and only a portion of the owners registered these obligations as required by law. In 1915 a penalty was imposed upon any such property inventoried in an estate where the tax had not been paid. The maximum period that could be taxed was limited to the ownership for five years at the rate of 2 per cent per year so that if the penalty was imposed for the full time it would take 10 per cent of the value of the property. The penalty was divided between the town in which the decedent resided and the State in the ratio of sixteen mills per year to the former and four mills to the latter. The infliction of this penalty has increased the receipts to the State from this source in excess of $500,000.00 per year. The receipts from the penalty in

1924 amounted to $241,796.63, this amount including the total receipts to the towns and the State. Some very large amounts have been assessed, one town receiving about $70,000.00 from one estate and another small town received nearly enough from the same source to cancel its indebtedness.

Inheritance Tax

The first law imposing a tax upon inheritances was passed in 1889 following the report of a special commission on taxation. This act provided for a levy of 5 per cent upon all property passing to collateral heirs in excess of $1,000.00. A few years later, the act was amended exempting $10,000.00 and providing a tax on one half of one per cent on the amount passing to lineal heirs and 3 per cent on that portion passing to collaterals. Nearly every legislature has passed some legislation with regard to the exemptions and the rates to different classes. At the present time, the exemption and rate is favorable to those nearest of kin, with increased rates to the collateral heirs and to those who are "strangers to the blood," or not related. The amounts collected have varied greatly according to the different provisions of the acts and the increase in wealth of the citizens. During the earlier years of its operation it yielded about $75,000. per annum, increasing to over $1,000,000 in 1911 and to the great amount of $2,573,000 in 1923. It has been the intention of the Legislature to keep the provisions and rates on an equality with the neighboring states in order not to discourage residence in this State of people of large means.

Capital Stocks of Banks and Insurance Companies

The method of levy upon the shares of the banks and insurance companies in the earlier years was one-half of one per cent on the market value of the shares owned by non-residents, the resident stock being taxed in the town where the owner resided. The method of taxing the resident owned stock was later changed owing to the various assessed values in the different towns and also the great difference in rates of taxation, thus making a considerable difference in the net return to the owners. At the time of the change in method the average rate was about ten mills, the corporations paying at this rate upon the market value to the state treasurer who distributes to the towns where the ownership is located retaining the amount paid upon the non-resident stock. In 1915, in addition to this amount, the law provided for the additional tax of one-half of one per cent to be retained by the State. The State for many years collected a tax of 2 per cent upon the premiums received by agents of foreign insurance companies. It also collects from the mutual life and fire insurance companies in the State.

Tax Upon Miscellaneous Corporations

In 1915 the state expenses had increased without corresponding increases in receipts and new sources of taxation were sought. A tax of 2 per cent was imposed upon the net profits of all corporations not otherwise taxed, with provision to equalize the amount upon corporations that conduct a portion of their business outside of the State. As there was no data showing the net profits of the corporation, no estimate could be made of the amount that

would be raised by this method. As the principal corporations are manufacturing concerns the receipts vary with the conditions of industry. In 1916 the first year of its operation, it yielded $1,598,000 but dropped down in 1923 when industry was depressed to $850,000. A. year later it had advanced to $2,100,000. A tax of 1½ per cent was laid upon the gross earnings of public service corporations such as gas, water and electric light companies, which yields over $450,000 toward the expenses of the State. The provisions of the act of 1915 taxing incorporated concerns did not include the companies which were doing business as individuals or partnerships. These were covered by a later provision upon a gross earnings basis at the rate of one per cent with a minimum tax of $5.00. This was advocated upon the principle that it would equalize the contribution of the two classes of business; it adds to the receipts of the state treasury about $600,000.00 per annum. The tax upon telephone and telegraph companies, car companies and express companies also adds about $500,000.00.

Automobiles and Good Roads

The good-roads movement had come into existence a little before the advent of the horseless carriage, and the reduction of steep grades and the hardening of soft road conditions began to receive the attention of a state-wide road programme. It commenced in conjunction with the towns which shared in the expense. This process developed short stretches of road in many places and hardened the surfaces of some of the worst places. When the automobile began to appear in numbers there was soon a demand for continuous stretches of road on the main thoroughfares. With this demand came the neces-

sity for large expenditures of money and a program not confined to town limits, and the establishment of a Highway Department with a highway commissioner at its head. As this development of roads was for the benefit of self propelled vehicles the theory was soon advanced that this class should bear some of the burden of cost. There, probably, has never been in the history of state functions any that has developed so rapidly as the motor vehicle transportation and the good-roads movement. An attempt has been made to assess upon this method of transportation a portion of the road cost according to the damage or wearing qualities of the different types of vehicle. This has been done by a registration fee varying from a small assessment for the small car to a sum on the larger and heavy truck, which prohibits their use where the load would be destructive to the highway. These fees go directly to the Highway Department to be expended on the roads and have increased from a small amount of receipts in twenty-five years to the enormous sum in 1924 of nearly $5,000.000. In 1921, a tax of 1c. per gallon was placed upon gasoline except that used in industry and in farm machinery. This amount also goes toward highway construction and amounted in 1924 to nearly $1,000,000. For the year ending June 30, 1924, there was paid into the state treasury by the operation of the laws governing the different activities about $14,250,000, about $4,000,000 additional being derived from the collections for the board and care of patients in the state institutions and refunds for widows, aid from the towns and counties, incorporation fees, court fines, interest on bank balances and miscellaneous sources.

Bonded Indebtedness

A survey of the indebtedness of the State portrays the policy of those in authority during the different periods. The treasurers' reports for the years up to 1838 show that there was a cash balance in the treasury and no debt at the end of each year. In 1838 there was no cash in the treasury and the State owed $20,565.46. This indebtedness was wiped out the next year, and again there were cash balances until 1847 when there was a debt of $11,565.68. This situation continued with a small fluctuation until 1853 when there was a considerable balance in the treasury, and no debt. With the breaking out of the Civil War and the demands upon the State, Bonds were issued in amounts of $2,000,000 each in the years of 1861-1863, $4,000,000 in the year of 1864, and $2,000,000 in 1865, all for the term of twenty years at the rate of 6 per cent. Ten years later over half of this amount had been redeemed. The following ten years did not disclose the ability to reduce the State's obligations, and the funded debt remained the same, but the decade following reduced the amount by one-half to $2,300,000. This amount was gradually reduced, until 1907 the State had a surplus in its treasury of $265,000.00.

In 1909 the State commenced to issue bonds to pay current expense, and in the years 1909, 1910 and 1911 issued $1,000,000 respectively, and in 1912 issued $4,000,000, the net debt in 1915 reaching about $12,000,000. The revision of the tax laws of 1915 increased the income of the State in the years of 1916, 1917, and 1918, so that the entire net debt was cancelled, and there was a surplus of about $600,000 on hand. In 1924 the State had a funded debt of $16,000,000; it had a sinking fund of suffi-

cient amount to cancel the entire amount at maturity. Although the books of the treasurer show a net debt of $1,500,000 the State owns Liberty Bonds to the amount of $2,500,000.00, the income of which is used for the soldier relief fund. The indebtedness of the State was greatly increased during the Civil War and a considerable amount was refunded by the National Government but the final settlement had not been reached. In 1897 the following act was passed:

Special Act No. 399, 1897.

AUTHORIZING THE GOVERNOR TO APPOINT AGENTS AND ATTORNEYS ON BEHALF OF THE STATE TO COLLECT CLAIMS AGAINST THE UNITED STATES

Resolved by this Assembly: That the Governor is hereby authorized and empowered to employ agents or attorneys on behalf of the State at such compensation as he may determine, payable without further appropriation, but only out of any sums that may be collected thereunder, and without any liability on behalf of the State for any expenses, to present, prosecute, and recover before the Congress, any department, the court of claims, or the Supreme Court of the United States, the costs, charges, and expenses properly incurred by this State for enrolling, subsisting, clothing, supplying, arming, equipping, paying, and transporting its troops employed in aiding to suppress the insurrection against the United States between the years 1861 and 1865, both inclusive, under an act entitled: "An Act to indemnify the States for expenses incurred by them in defense of the United States," approved July 27, 1861. Approved May 26, 1897.

Acting under the provision of this Act, Governor Lorrin A. Cooke entered into a contract with the Hon. Samuel A. Fessenden for the collection of the amount due the State as follows:

MEMORANDUM OF AN AGREEMENT AND APPOINTMENT made this 6th day of December, A. D. 1897, by and between the State of Connecticut, by Lorrin A. Cooke, its Governor on the one part, and Samuel Fessenden, of Stamford in said State, on the other part, WITNESSETH:

WHEREAS the General Assembly of the State of Connecticut, at its January Session A. D. 1897, passed a Resolution approved on the 26th day of May, 1897, by virtue of which the Governor of the State was authorized and empowered to employ agents or attorneys on behalf of said State at such compensation as he might determine, payable without further appropriation, but only out of any sums that may be collected thereunder, and without any liability on behalf of the State for any expenses, to present, prosecute, and recover before the Congress, any department, the court of claims of the Supreme Court of the United States for costs, charges, and expenses properly incurred by this State for enrolling, subsisting, clothing, supplying, arming, equipping, paying, and transporting its troops employed in aiding to suppress the insurrection against the United States between the years 1861 and 1865, both inclusive, under an act entitled: "An Act to indemnify the States for expenses incurred by them in defense of the United States", approved July 27, 1861.

NOW, THEREFORE, the said Lorrin A. Cooke, Governor of the State of Connecticut, in pursuance of the authority aforesaid, in consideration that said Samuel Fessenden agrees to undertake the presentation and prosecution of said claim as set forth in said Resolution, does hereby appoint said Samuel Fessenden agent and attorney on behalf of said State of Connecticut, for the purposes aforesaid, and at the compensation of 25 percentum of the entire sum collected payable only out of any sums that may be collected hereunder, and without any liability on behalf of the State for expenses incurred in the prosecution of said claim of any kind or nature whatsoever.

AND said Samuel Fessenden agrees to undertake the presentation and prosecution of said claim at the compensation above stated, and without any liability on behalf of the State for any costs or expenses incurred in the presentation and prosecution of said claim.

IN WITNESS WHEREOF, the said Lorrin A. Cooke, Governor in behalf of the State of Connecticut, has hereunto set his hand, and the seal of the Executive Department of said State is

hereto affixed, and the said Samuel Fessenden has hereunto set his hand and seal the day and year first above written.

LORRIN A. COOKE, Governor of Connecticut.
SAMUEL FESSENDEN. (Seal)

Signed, and sealed in duplicate
in the presence of
FRANK D. ROOD,
GALEN A. CARTER, JR.
as to S. F.
(State Seal)

At the time this contract was made there was no means of ascertaining the amount that might be collected, if any. Action for similar amounts was being considered by other States and, through a decision in one of these cases, a settlement was made and the state treasurer calls attention to the fact that the three-fourths that the State received amounted to $454,920.45, the other fourth going to Mr. Fessenden according to the contract. The State's portion was used to reduce the indebtedness.

The record of the financial standing of the Commonwealth does not convey to the mind the whole story of over a century. In that time property has been accumulated to a value of over $62,000,000. This sum in itself is small in comparison to the value it represents in its investment in buildings and equipment for the care of its mentally sick, or deficient in mind, or crippled in body, or those handicapped by loss of sight or hearing, or speech, or those inflicted by the great white plague, in its Institutions for the reformation of its youth, in its Institutions of learning, or any of the functions that aid and assist to give comfort to the unfortunate, conserve the health of its people, or to stimulate good citizenship. It has a monument in the beautiful State Capitol, in its State

Library with its invaluable collection, in its State parks, and good-road system.

Connecticut at this writing is following very closely the "pay as you go" basis established many years ago in spite of the fact that the expenses have increased many times during the century since the adoption of the Constitution of 1818, and in the year ending June 30, 1925, amounted to over $24,000,000. The sources of wealth and taxation have also increased in equal or greater proportion, and it is doubtful if the burden is felt as greatly by our citizens as during the time when land and improvement were taxed for the expenses of the local municipalities and for State purposes also. In 1853, one-third of the entire State receipts were from the tax upon towns, and in 1863, nearly one-half from this source. In 1923, the amount raised by the tax upon towns was fixed by statute at $2,000,000 which was only about one-tenth of the entire amount raised, and for the fiscal year of 1924-1925, the amount was reduced to $1,500,000.00. If the grants to the towns for highway and school purposes are taken into consideration, the burden is not great.

Nearly every transaction of daily life contributes to the expense of the executive, judicial, educational, humanitarian, or constructive activities of the State. A ride upon the steam railroad or the electric line contributes to the gross earnings tax. Before an automobile can be used upon the highway it must pay for the privilege according to the type and power of the car, and each gallon of gas pays one cent tribute for the care and upkeep of the road, and the driver must contribute his three dollars per annum for the privilege of driving over the highways. Should he be unfortunate and get into the toils of the law for any infraction of the rules of the road

the enforced contribution arrives at the same destination. When amusement is sought at the movies, the dance-hall, or the boxing match, the baseball or football game, again the collector of taxes demands his portion. When the comforts of the public utilities are sought, and use is made of water, gas or electric light, tribute is exacted. When trade is carried on with "the butcher, the baker or the candlestick maker," the business tax looms up on the basis of the gross business transacted, and the incorporated business makes settlement on tax day according to the profits. Those who are provident and lay aside for the rainy day, either by savings or investment in bonds or insure their lives for the protection of their families or protect their property against the ravages of fire, windstorm or theft, are not forgotten in the scheme, and even death cannot defeat the exaction of some part in the ever increasing expenses of the State. The heart of the tax-gatherer shows a little kindness when it recognizes those nearest and dearest with some beneficence, placing a slightly heavier burden upon those a little further removed, and the heaviest upon those who are "strangers to the blood," and, if through ignorance of the law or with intent during life the lawful contributions have not been made, penalties will correct this evasion.

Thus with the continual changes of the conditions affecting society, the involuntary contribution toward the expenses of Government of our State is well expressed in the lines:

"Men may come and men may go, but I go on forever."

THE LITERATURE OF CONNECTICUT

By Stanley T. Williams

Born Meriden, Connecticut, October 25, 1888. Graduated from Yale College, B.A., 1911. M.A., 1914; Ph.D., 1915, both degrees from Yale University. Since 1915 teacher and writer.

WHEN Thomas Hooker (1586-1647) left Massachusetts in 1632 to found a new colony he became, incidentally, the first literary man of Connecticut. Theologian would better describe the pioneer and preacher whom Cotton Mather's "Magnalia" describes as "the light of the western church." He would probably have been amused, possibly scandalized, if he could have known that a profane professor would mention him as a man of letters. He was a tremendous person, Hooker; not one to associate lightly with literary graces; a strong man, one of those, of whom Bradford might have said that he was not, like other men, "easily discouraged"; a fighter for freedom of thought, with a well of tenderness in him. I choose to begin this brief history of the literature of Connecticut with Thomas Hooker. Let us not echo Mather's disrespectful phrase about going "to hear what that bawling Hooker will say to us," but let us consider what connection he has with literature.

Of Hooker's writings some thirty titles are extant. When I looked for these in the library I found that comparatively few had gone out as summer-reading. Everyone, perhaps, should read, but probably few do: "The Soule's Humiliation" (1637); "The Soule's Preparation" (1632); "The Soule's Implantation" (1637); or "The "Soule's Vocation" (1638). Was it my fancy that the last volume had been moved slightly as if a deceived reader had thought it for a moment "The Soule's Vacation?" I think so. Hooker can be claimed as a man of letters only by virtue of a certain vigour of style, a lucidity of thought, and for another reason which I shall mention presently. In fact he says defiantly in one preface: "As it is beyond my skill, so I profess it is beyond my care to please the

nicenesse of men's palates with any quaintnesse of language. . . ."

The other reason for considering Hooker is our necessity for including every writer of distinction in the early Colonial period, to counterbalance the riches of the Bay State. Surely the epigrammatist who remarked that the Pilgrims were too actively engaged in making events to write about them, forgot the Mather dynasty of Massachusetts. To contemplate the literary carcasses left by this distinguished family is depressing. "Be brief," wrote Cotton Mather on his doorway, and then continued the "Magnalia Christi Americana" (1702). Alas! we had during the latter half of the seventeenth century no historians like Winthrop and Bradford; no ribald poet like Thomas Morton of Merrymount; no Nathaniel Ward with his account of the seventeen sects who discovered " the northwest passage to heaven"; no sweet Anne Bradstreet, to be the ancestress eventually of the Holmes, the Danas, the Channings, the Phillips,—and of many readers of this paper, who may be annoyed that I have not mentioned them by name. In fact, the fifteen years' interval between the founding of the two Colonies meant much to literature. The nucleus of the learning of Massachusetts was Harvard College, but Yale was not founded until the beginning of the next century.

Thus the literature of Connecticut before 1700 is practically a distinguished blank. The Colony suffered from the same disadvantages which beset the older one, with additional handicaps. There was no university. The Colony had, at first, less solidarity. The Indians on its frontiers were more active. The conditions were ideally unfavorable for the production of literature. There are, of course, names which might be mentioned, but of all the

rather small planets, we shall glance only at one Roger Wolcott (1679-1767), and then pass on to more gracious days for literature. I select Wolcott for himself, on the basis of merit, but I confess I am glad to have a chance to quote one of the grandest sentences in all American soft-soap biography: "Had his childhood," says this worthy of Wolcott, "been passed in *pampered indulgences,* his youth might have been wasted in *slothful indolence,* and his name might never have graced *the page of history* or been known upon *the scroll of letters.*" (I cannot claim these phrases but I flatter myself on the italics.)

An examination of Roger Wolcott's verse reveals that the "scroll of letters" was a minor aim in an energetic life. Born in Windsor in 1679, he embraced every type of Colonial activity. We hear of him in business in Windsor; as commissary of the Connecticut forces in the Canadian expedition of 1711; as major-general at the capture of Louisburg in 1745. His career as assemblyman, judge, Deputy Governor, and chief judge of the Superior Court culminated in 1751 when he became Governor of the Colony of Connecticut. He died on May 17, 1767 at the age of eighty-eight. The muse, with so many rivals, must have been a rather cold mistress. She yielded to the distinguished colonist but a scanty sheaf of verses, though most of these have the tedium of longer productions. The chief division of "Poetical Meditations" (New London, 1725) has, after the fashion of the day, almost as many lines in its title as in the body of the poem. These number fifteen hundred and depict Winthrop trying to describe the charms of the Colony to his Majesty, the King, in London. At the end of the poem, the King, having limped through a long reply to Win-

throp, concludes in lines which do ample justice to Wolcott's style and accuracy of rhyme:

> And let the Sacred Order of the Gown
> With Zeal apply the Business that's their own.
> So Peace may spring from th' Earth, and Righteousness
> Look down from Heaven, Truth and Judgment kiss.

Some of Wolcott's poems have brevity, a virtue not to be despised by any student of Colonial literature, especially when weary of its piety. This last, at least, the poems of Roger Wolcott possess. His fame as a poet shows clearly the dearth in the Colony either of talent or of literary taste.

The literature of Connecticut really began in the eighteenth century. No one will deny that it began impressively, namely with the birth of Jonathan Edwards (1703-1758) at East Windsor. Now a captious critic might take thought that after 1727 the great divine was identified with Massachusetts or even less distinguished communities. In fact a very nice question arises about various celebrities: does birth determine our claim? Or residence? Or parentage? The last was suggested by a friend of mine who declared flatly that a child, as in the case of nationalities, takes the affiliations of its parents, wherever born. Whereupon he quoted Dean Swift on the question of being Irish or English. "If a cat," said the Dean, "had kittens in an oven, would you call them biscuits?" Born of Connecticut parents may a man live in Bagdad and be still a nutmeg? Such questions I shall not attempt to settle. My test shall be whether the writer lived during the most significant period of his life in Connecticut. By such a token Jonathan Edwards cannot receive much space.

Those tremendous feats of the mind and spirit which won for Edwards in England the praise of Dr. Johnson, and, finally, the recognition of the world, were performed after he was ordained at Northampton. It was during this pastorate of twenty-four years that he organized his famous church; wrote his most moving sermons; led the Great Awakening; and was finally deposed from his autocracy. Then were completed in 1754, those works which are mighty yet: "The Freedom of the Will," and his last labors among the Indians. Most of us could sketch the outline of this life. We have looked with wonder in picture or memorial tablet or statue on that stern, sweet face. How strange it sometimes seems to behold him on the Tower looking down at the hurrying crowds on the old campus. Do these youth belong to the Elect? What has become of the dark empire which, Edwards believed, held dominion over the soul of every human being, yes,—of every child, who, after all, he said, were little vipers. (He himself was the father of numerous vipers). We sicken as we think of the Enfield Sermon or the terrible scenes when men begged for mercy, and women were carried out fainting, during his delineations of the Last Judgment.

Yet how false a picture this is! His perfectly wrought sermons, with their syllogisms and arguments and conclusions were not thundered forth by an angel of wrath. Leaning on his elbow, his intellectual face almost expressionless, he read in the lowest of tones, with underemphasis, the most terrible conclusions about life that man has ever evolved. ("Think of a Being", James Mill was wont to say to his son, "who would invent a Hell!") Jonathan Edwards read his sermons quietly as if he were working out an equation in algebra, and with that air of

certainty which we associate with the expert mathematician. This was far more deadly than vituperation. It absolves him, also, of the charge of cruelty. The scheme of John Calvin was, for Edwards, merely the most logical explanation of life. Then, too, we think of him when he meditates, as he says, on the sweet excellency of Christ. Walking alone in the fields near New Haven he is overcome with the beauty of His presence—nearer than breathing, closer than hands and feet. It is the mystic ecstacy once again; the intolerable joy of a Saint Teresa; the rapture of an Assisi or an Augustine; the happiness of a Newman as he is sensible beyond doubt of the existence of his Creator. Puritans, we have banished your world of darkness! Yet alas! with it has gone, too, that world of white light, that certitude of God.

Edwards's associations with Connecticut are those of youth. Here he passed his boyhood, and in 1720 he was graduated from Yale College. He had already sent a friend of his father in Europe a disquisition on spiders, and the four years in New Haven were not to betray his intellectual promise. As happens occasionally now, this student gave more to the university than he received. By a severe regime of self-discipline of body and mind, he laid the foundations for the achievements of later years. For this reason we may perhaps claim him as a writer of Connecticut, but I suspect that he is great enough to owe nothing to locality: Edwards would have been Edwards, the philosopher, theologian, and mystic, had he been born and reared in Europe. He was the greatest American thinker of the eighteenth century.

In contrast to Jonathan Edwards, who belongs to the literature of all time, there appeared in the middle of the eighteenth century a group of writers who were destined

to link Connecticut more definitely with verse, with the essay, and with journalism. If these were less gifted, they were also more human. They were friends with similar aims in literature. Many of them were Yale graduates, and some of them had been in college together. We think of them as affiliated with the college and also with Hartford, where they met after the war, and where they wrote most successfully. Thus though neither title includes all the names in this group (nor are the groups identical in personnel) they came to be known as "The Yale Poets" or as "The Connecticut Wits." (A title perilously subject to parody by the change of a vowel.)

"The Connecticut Wits," as we shall call them, have still a local interest. They enjoy likewise significance as a group in American literature. Provincial as their writing and thinking were, they were in some ways the earliest coterie in the country. The tendency had been to produce distinguished theologians, like Cotton Mather, or religious poets, like Michael Wigglesworth, author of that exhilarating poem, "The Day of Doom" (1662); or, especially in Virginia, straightforward narratives of adventure or exploration, such as the buckram records of William Byrd of Virginia. The cultivation of belles lettres for their own sake was not an ideal in the life of the two oldest colonies. Jonathan Edwards was far from patient when he discovered that the young people of his parish were reading Richardson's "Clarissa Harlowe," and though the Reverend Mather Byles, like many others, imitated Pope, it was generally understood that literature was not primarily part of the Lord's work. Years later even, when Hawthorne wrote "The Scarlet Letter," a book nobly free from questionable ideas, a reviewer asked, horrified: "Has the French era begun in American litera-

ture?" Literature for at least a century in America remained the handmaiden of religion, and it is extremely doubtful if our public libraries are gratifying to the New England saints as they look down on them from Paradise.

Well, there was nothing heretical about the "Connecticut Wits." They were churchmen, some of them, and are now, we trust, safe in Abraham's bosom. The interesting aspect, however, of their work is that they were pioneers in what is so necessary for the development of culture: literary society. They met; they showed their writings to each other; they talked about books. They did what Dr. Johnson said was important to good conversation and writing: they threw the ball back to each other; they discussed literature. Charles Lamb thought the essential influences for the creation of literature were social intercourse and communication in cities. The real urban literary center was to develop presently in New York with a leader named Washington Irving. Yet this little group which met at "The Bunch of Grapes"—convivial name!—or "The Black Horse Tavern" in Hartford, dealt a shrewd thrust at the provinciality of early American literature.

I suppose you could name most of these "Pleiades." There is a delightful vignette of each in Francis Parsons's "The Friendly Club." I shall let you turn there for their photographs. I am interested rather in their minds, in the thoughts of these young men of the mid-eighteenth century, young men deeply interested in literature. An interesting, if somewhat baffling member of the group was Joel Barlow (1755-1812), destined to live a life like quicksilver, and to write a book like lead. Let me introduce the statesman, traveller, adventurer, and the author of an epic poem so dull ("The Columbiad," 1807) that it becomes a joke for a century. Yet there is fibre

in this Barlow. We shall consider him, and each of his friends at length later. The tonic of the group was John Trumbull, the satirist, unless the author of "M'Fingal," like many another witty writer, was silent in company. Here too "Gallant Humphreys charm'd the list'ning throng." At least so says Barlow. Here too were Noah Webster, the lexicographer, and Timothy Dwight, not yet dreaming of his epic, as moribund as Barlow's, or of lines which the latter might have envied:

> Why streams the life-blood from that female's throat?
> She sprinkled gravy on a guest's new coat!

This is not deliberate wit in the manner of Pope but the concluding couplet of a denunciation of slavery. Theodore Dwight, Lemuel Hopkins, Richard Alsop, Elihu Smith, and Mason Cogswell were less brilliant stars in the new literary constellation.

These young men were interested in literature, but their contemporary reputation as a group depended upon their political satire. In "The Anarchiad" (1786), they attacked, among other evils, abuse of the currency system. This series of papers was supposed to be part of an epic which antedated Palmyra. As far as the modern reader is concerned, it does still. The fury of these papers sounds strangely petulant, and even its clever burlesques, and its deft references to "Shay's Rebellion" send us off gently into the land of dreams. Yet in "The Anarchiad" was good occasional verse. This served its purpose: appearing first in the New Haven "Gazette" in 1786-1787, it was reprinted many times and helped to enforce convictions concerning the need of a strong central government. "The Political Greenhouse" (1799), attacking the Jeffersonian democracy, was less convincing. These early satires gain in in-

terest, if we compare them (noting their references to Wethersfield onions and other idiosyncrasies of Connecticut) with the sharper version of our traditions in Irving's "A History of New York" (1809). No dweller along the Connecticut River can read this latter book without longing to have a long and forceful conversation with the shade of Washington Irving.

Thus "The Connecticut Wits," according to the irony of the gods, wrote furiously for one purpose and are remembered for something else. We weary of "The Political Greenhouse," but single poems and sketches are still delightful. Some of the wits lived romantic lives. If Joel Barlow, for example, had as mysterious a nature as Mr. Parsons thinks, he would make an interesting study for a novel. Unluckily there is no chance of telling whether Barlow was "a foiled circuitous wanderer," nobly overcome by the stress of this world, or merely a blunderer, with a heavy taste in literature. There is no chance of telling, for all that he has written is objective. It was not the fashion in the eighteenth century to reveal one's soul in poetry. Barlow preferred to describe the glories of Columbus or of "Hasty Pudding."

On the whole it seems that Barlow was uneven in ability: he could write excellent couplets, but he lacked self-criticism. He had energy, but he wanted singleness of purpose. His change from a writer of psalms and an orthodox Federalist to a citizen of free France and a celebrant of the guillotine, must have amazed his New England friends. These vagaries, however, were part of his picturesque life. When we notice, for instance, that he was once the editor of a magazine called "The American Mercury" we feel that Mr. H. L. Mencken of the present "American Mercury" should know of it at once. Joel Bar-

low and H. L. Mencken! At least our modern scorpion would approve of Barlow's emancipation from provincialism. The two, after all, are not utterly unlike.

Suppose, for instance, one evening at the tavern one of the wits had turned to Barlow and remarked casually: "As for you, Barlow, you will die in the Polish village of Zarnovich. The last sounds you will hear will be those of Napoleon's retreating troops." In response Barlow would probably have written an exceptionally dull couplet for the "Columbiad" to prove his remoteness from such reality. The events leading up to this climax were varied. At Yale Barlow was the poet of the class of 1778. After graduation he served as army-chaplain. Later we learn that while in love he is working on a philosophical poem. It is *the* poem, "The Vision of Columbus" (1787) is engendered. Perhaps he declaimed it in his room, and sent the first drafts to this wretched young lady. Soon he was secretly married. We can not motivate all Barlow's activities; we can only chronicle and marvel at his versatility. When his "Vision of Columbus" appeared in 1787 he had been a minister, a lawyer, an editor, and the reviser of a psalm-book. Had we a diary of his we should undoubtedly discover an increasing liberalism. He did not become a Jacobin over-night.

As his horizon widened, Barlow the translator of psalms ceased to be. In his place was Barlow, the business man and statesman. He had an unfortunate but guiltless connection with the Scioto Land Company, a disreputable organization which transferred many a hopeful Frenchman to a dismal career in the middle-west. Barlow himself remained in Paris, and cast off the remnants of his Puritanism. He became "un ami du peuple." Not even Horne Tooke wrote more vigorously for liberty

than Barlow. "Liberty" has never been on men's lips more often than in this last quarter of the eighteenth century. One is impressed less by the crimes which were committed in her name, than by the follies. It is enlightening to behold a Thomas Jefferson in meditation on such questions, but not a Thomas Paine, — half-educated, "rebellious staymaker, unkempt," growls Carlyle. Such and worse were many of the apostles of liberty, brawling, as the Frenchman, de Crèvecoeur, says of the citizens of Boston, about liberty, without knowing what it was all about. Nor did, I think, Barlow understand it. His "Advice to the Privileged Orders" was suppressed, but he was awarded French citizenship.

While in Paris Barlow translated Volney's "Ruins," and —we shudder at the possibility—planned a colossal history of the United States from the point of view of true freedom! His real destiny seemed to be to adjust difficulties between France and his own country; it is said that once he averted war. Seven years later he returned to America, not forgetting to bring with him the Brobdingnagian Columbus. So the wanderer returns: to the Republicans, a messenger of light; to his erstwhile companions, the Federalists, an Iscariot. Still there were other things than Republicanism on his record; he had made a fortune in French securities; he had been the intimate friend in Paris of Robert Fulton; and at Algiers he had secured the release of American captives. It is likely that he did not wish himself once more the class-poet. At any rate he did not return to New England. With resignation we hear of his new, magnificent house in Rock Creek Park, in Washington. Who but Joel Barlow (Robert Southey only excepted) would have called it "Kalorama"? In 1807 the "Columbiad" appeared.

A rub of the lamp, and the class-poet is back in Paris (1811) to plead with Napoleon about the losses to American commerce. Yet in little more than a year he is dead. He had hurried on to Wilna to interview the Emperor, but near Cracow, he died of an illness brought on by weariness and exposure (December 22, 1812). Strange as this life seems, it may reasonably be called typical of the Revolutionary era. A contemporary poet, Philip Freneau, with as quiet a boyhood, was also forced into a life of excitement. It was a time of unrest, and the literature produced was a literature of excitement. It was not a freak, after all, that the New England boy died in Poland. More than the other "wits" Barlow responded to the spirit of the age. We cannot imagine Timothy Dwight forgetting Puritanism long enough to hymn the guillotine.

How much stranger it is that this quick, adaptable mind should have fashioned such a lump of clay as "The Columbiad! Hasty-Pudding" (1796) is different. Sitting one day in a Savoyard inn he found before him a dish of polenta, or Indian meal, and in lines dedicated to Mrs. Washington he sang the glorious dish; sang it lightly, gaily, wittily. What victim of "The Columbiad" will believe that this friendly mirth from the third canto of "The Hasty-Pudding" is Barlow's? Here is the famous passage on spoons:

> There is a choice in spoons. Tho' small appear
> The nice distinction, yet to me 'tis clear,
> The deep bowl'd Gallic spoon, contriv'd to scoop
> In ample draughts the thin diluted soup,
> Performs not well in those substantial things,
> Whose mass adhesive to the metal clings;
> Where the strong labial muscles must embrace
> The gentle curve, and sweep the hollow space.
> With ease to enter and discharge the freight,

A bowl less concave, but still more dilate,
Becomes the pudding best . . . . . .
Fear not to slaver; 'tis no deadly sin.
Like the free Frenchman, from your joyous chin
Suspend the ready napkin; or, like me,
Poise with one hand your bowl upon your knee;
Just in the zenith your wise head preject,
Your full spoon, rising in a line direct,
Bold as a bucket, heeds no drops that fall,
The wide mouth'd bowl will surely catch them all.

Good eighteenth century verse this. Then why a "Columbiad?" It often happens. Set the most facile at a desk, and they revert to formalism. Then, too, Barlow wrote with a purpose. There should be a poem—it was Dwight's idea, too—which was as large, as tremedous as the vast continent of America. Let there be a Niagara of poetry as well. I sometimes think that the fulfillment of this patriotic attitude towards literature came in Joachin Miller's poetry of the Sierras. Perhaps there is a relation between geography and a national literature, but Barlow was not the man to demonstrate it. In spite of the thickness, and surface dimensions of his book; in spite of the engravings, which made it as inspiring as a family tombstone—"The Columbiad" was a bore, and like the vast prairie, was flat and endless.

One passage at least you must read. Professor Beers is, presumably, the only man who has read through "The Columbiad," though I have had various honour students succumb in the attempt. The poet is speaking of war:

Columbus turn'd; when rolling to the shore
Swells o'er the seas an undulating roar;
Slow, dark, portentous, as the meteors sweep,
And curtain black the illimitable deep,
High stalks, from surge to surge, a demon Form,

That howls through heaven and breathes a billowing storm.
His head is hung with clouds; his giant hand
Flings a blue flame far flickering to the land;
His blood-stain'd limbs drip carnage as he strides,
And taint with gory grume the staggering tides;
Like two red suns, his quivering eyeballs glare,
His mouth disgorges all the stores of war,
Pikes, muskets, mortars, guns and globes of fire,
And lightened bombs that fusing trails expire.
Percht on his helmet, two twin sisters rode,
The favorite offspring of the murderous god,
Famine and Pestilence; whom whilom bore
His wife, grim Discord, on Trinacria's shore;
When first their Cyclop sons, from Etna's forge,
Fill'd his foul magazine, his gaping gorge;
Then earth convulsive groan'd, high shriek'd the air,
And hell in gratulation call'd him War.

This is literally grand poetry, and there are five thousand lines of it just as good. Sometimes the grandiose manner trails away into a frankly silly line as in the description of William Tell:

Picks off the pippin from the smiling boy.

In the main, however, Barlow holds the pitch. There is something startling in the mention of Danbury and Norwalk and the Connecticut River in this age-old form, the epic, yet even in our amusement we feel that "The Columbiad" with its national theme, its optimism, and its energy, heralds later American literature.

John Trumbull (1750-1831), a satirist with a keener talent than Barlow's, must have been terrifying as a small boy. Born in Westbury, in 1750, he did not merely lisp in numbers. He could repeat, word for word, so runs the legend, all the verses in the "New England Primer," a feat almost as remarkable and less interesting than Ma-

caulay's adult performance of reciting "Paradise Lost." The "New England Primer" we might have borne with fortitude, but it was this infant dynamo's custom to cap these verses with all of Dr. Watt's "Divine Songs for Children." For such a youth it was nothing to pass the entrance examinations for Yale at the age of seven; he met the ordeal sitting in the lap of a boy of twelve years. (Academic forms were then less exacting.) Yet his parents held him back; he did not matriculate at the college until he had reached the seasoned age of thirteen years. Trumbull's juvenile performance may well encourage or frighten, according to temperament, the parents of today. In comparison the study by John Stuart Mill of Aristotle at the age of twelve seems backward. One thinks of Stevenson's remark that such prodigies have seldom a shot in the locker left for later warfare in the world. But, no. In spite of a brilliant career in college, where he shared with his classmate, Dwight, a mastery of the classics, Trumbull was destined to write the most popular poem of the Revolution. His mature performance in life does not disappoint us. His was not what Bacon would call a "fragile" intellect, one which early lost its force. He was soon studying law in the office of John Adams in Boston. Few men enjoyed a longer mental life. He lived on till 1831, in time to see the new American literature, and he proved his vigour in old age by moving at the age of seventy-five to the frontier-post of Detroit.

Trumbull belongs to Connecticut. In him also, without the vagaries of Barlow, were many of the tendencies of eighteenth century literature. In college he was prophetic of a type of undergraduate who later appeared more frequently; he browsed about in the literature of the day; he wrote for newspapers; and he was sensitive to cur-

rent literary fashions. Strange as it may seem to us who know the glories of imagist verse and polyphonic prose, the writers whom Trumbull sought out and read were Gray, Collins, and Goldsmith. The odes which the boy composed, his elegies, and his fables in verse need not be rescued; they are too reminiscent of his masters. In fact these boyish efforts rather deserve the title of his first important poem, "The Progress of Dulness," which appeared (Part I) in 1772. Here are Tom Brainless and Dick Hairbrain and Harriet Simper, all of whom, even Harriet, are found in our classes today. For this poem was a satire on college education (Would it had been the last!). The octosyllabic verses move on pleasantly. Occasionally there is a mirage in the form of an almost witty couplet:

> For he that drinks till all things reel,
> Sees double, and that's twice as well.

In 1774 appeared Trumbull's "An Elegy on the Times," inspired by the Boston Port Bill, an echo of his political interests. In the next year these enthusiasms and his wit were wedded in "M'Fingal" (1775; 1782).

My delightful old anthologist, whom I have already quoted on Roger Wolcott, is, I find to my astonishment, inclined to favour "The Progress of Dulness" to lively "M'Fingal," but I fancy I can understand that. In discussing "M'Fingal" this critic refers, with warmth to "the free and unwarranted use of sacred Scripture throughout the entire work." Perhaps he scowled at such passages as the description of the minister. Trumbull is satirizing motives for entering the church:

> As thieves of old, t'avoid the halter,
> Took refuge in the holy altar,

Oft dulness flying from disgrace
Finds safety in that sacred place;
There boldly rears his head, or rests
Secure from ridicule or jests;
Where dreaded satire may not dare
Offend his wig's extremest hair;
Where scripture sanctifies his strains,
And reverence hides the want of brains.

The lines are not the best in "M'Fingal" but they are typical of its gaiety. How well the quotation describes in the last two lines the mind which prefers "The Progress of Dulness" to glorious "M'Fingal!" "M'Fingal" is a roaring, slap-stick, noisy, rattling, bumping burlesque on the Tories. It is in epic form. Its hero, a Loyalist, meets Honorius, a busy Whig, at a town-meeting. Then Squire M'Fingal harangues and harangues again his town-meeting, till, in the third canto, the mob rises up, tries him, and condemns him to be tarred and feathered. This jolly old custom is carried out, and M'Fingal rides, properly panoplied, through the streets of the town. Later in his cellar, in the "Vision," he suffers a change of heart and describes to his Tory friends the triumph of the Patriots. Perhaps the exaggeration wearies; we miss the point of some political allusions. Yet with what a rush and sweep the couplets hurry on! The climax of M'Fingal's career was like that of old Floyd Ireson of Marblehead. What a fate! How the wondering Europeans have envied us our ingenuity! And how merry a party the tarring becomes in Trumbull's cheerful verse:

Forthwith the crowd proceed to deck
With halter'd noose M'Fingal's neck, . . .
Then lifting high th' pond'rous jar,
Pour'd o'er his head the smoking tar . . .
His flowing wig, as next the brim,

First met and drank the sable stream; . . .
From nose and chin's remotest end,
The tarry icicles depend;
Till all o'erspread, with colors gay
He glitter'd to the western ray,
Like sleet-bound trees in wintry skies,
Or Lapland idol carved in ice.
And now the feather-bag display'd,
Is wav'd in triumph o'er his head,
And spreads him o'er with feathers missive,
And down upon the tar adhesive.

Possibly Honorius represents John Adams. Certainly the poem thrills with the intense excitement of the time: its town-meetings, its fierce disputes, and its rough punishments.

It would amaze any student of American literature who happens to glance over this paper, if I did not now do what critics have always done: compare Trumbull's "M'Fingal" with Butler's "Hudibras." Professor Wendell strains somewhat when he finds in the resemblance between the American satire of the eighteenth and the British satire of the preceding century a proof of his theory that Americans of the eighteenth century retained more than their contemporaries in England seventeenth century traits. "M'Fingal" has many couplets, such as

No man e'er felt the halter draw
With good opinion of the law,

which might have been written by the English Puritan, but in the main I have never felt that "M'Fingal" had seventeenth century characteristics. It is unlike Hudibras, as Professor Wendell admits, in many ways. The chief differences are: the tone, which is more bustling and eager, less restrained; the dull stretches; and the lack of profound

satiric analysis, which is so typical of the English poem. "M'Fingal" is an achievement. In a sense it is a culmination of the bookish life of Trumbull. No other American, unsteeped in the polished English literature of the eighteenth century, could have written it. It is said to have had thirty editions in England and America. Even now it is intensely alive.

Although Timothy Dwight (1752-1817) (whose first name as a poet so amused Byron) was ungracious enough to be born in Northampton, Massachusetts, by association with "the Connecticut Wits" he belongs to us, as well as by a pastorate at Greenfield and by service to Yale as a brilliant undergraduate and president. He was a grandson of Jonathan Edwards. At the age of nineteen he was made a tutor at Yale. He finished soon afterwards his epic, "The Conquest of Canaan," (1785). He spent a year in the army as chaplain, a position which he filled with distinction, although there is no record, I think, that he compelled the soldiers to sing in unison his dithyrambic battle-hymn, "Columbia." Dwight knew Latin at the age of six, was the first scholar in his class at Yale, and wrote poetry. More than this he was a man, and was destined to do a man's work in the world. After leaving the army in 1778, he returned home, to Northampton. Here he passed five vigorous years, toiling on the farm, preaching, and directing a school. Dwight had already declined to be considered for the presidency of Yale (at the age of twenty-five).

As a grandson of the great theologian, Dwight differed somewhat from another grandson, Aaron Burr. He retained the moral energy of Edwards, though it was less intense and softened by humanity. Anyone may detect throughout his active life, in the reasoned refusal of hon-

ours, in the obvious absence of self-interest, the essential goodness of the man. Stories still linger about Yale of his devotion to young men and their affection for him. His school at Greenfield Hill, where he was pastor for twelve years, was sustained by the same spirit. Most of all, the imagination travels back to those years (1795-1817) when Dr. Dwight (more than Louis XIV was the State) was Yale and Yale was Dr. Dwight. The old records of Yale tell us that "The seminary at the time was in a disordered condition, and suffering from pecuniary embarrassments." (Strange and new!) The old tale continues pleasantly: "New professorships were established, the literary and philosophical apparatus extended, and the course of study and the system of government changed." In spite of all this reorganization President Dwight contrived to teach the senior class of Yale College for twenty-one years. Well done! Such were our poets of the eighteenth century.

Yet was Dwight a poet? Even the old eulogists state his claims gently: "As a poet President Dwight was little inferior to any of his contemporaries in America." Far inferior to Freneau in lyric feelings; inferior to Trumbull in lightness of touch; he is perhaps the best of the imitators. Definite lines from Goldsmith or Thompson come to mind as we read "Greenfield Hill" (1794). Dwight was absorbed in books, and though he writes smoothly, there is a lack of vitality. In spite of its grandiose manner and terrific events "The Conquest of Canaan" is a rather mild poem. It must be remembered that this poem, with all its eleven books, was finished before Dwight was twenty-three years old. It is dull, dull, and absurd when among the battles of Israel we encounter a prophecy of the Revolutionary War. It partakes in tone and in provincial

ambition of the same spirit which created "The Columbiad." The following stanza, from "Greenfield Hill," one of many wails about the battle with the Pequots, might have interested plain-speaking John Mason:

> Swift to the Pequod fortress MASON sped
> Far in the wildering wood's impervious gloom;
> A lonely castle, brown with twilight dread,
> Where oft the embowell'd captive met his doom,
> And frequent heaved around the hollow tomb;
> Scalps hung in rows, and whitening bones were strew'd;
> Where, round the broiling babe, fresh from the womb,
> With howls the Powaw fill'd the dark abode,
> And screams and midnight prayers invoked the evil god.

Dwight's happiest mood is when he writes either in poetry or prose of the New England scenes which he knew so intimately. These country scenes are apt to be mild, but they are real. Several critics have also pointed out that Dwight's patriotism produced one or two passages which seem to prophesy the ringing words of Emerson on the need for national self-reliance. Dwight's lines follow:

> Ah then, thou favour'd land, thyself revere!
> Look not to Europe, for examples just
> Of order, manners, customs, doctrines, laws,
> Or happiness, or virtue.

Finally, as we think of the writing of this soldier, farmer, theologian, and educator, we feel again, as about these other men, unless we choose to be merely partisan, that in spite of his versatile talents, Dwight was provincial. There is an absence of "background" in all these writers: they lack the repose inspired by a settled community; they are wanting in self-criticism. If we once admit and accept this fact, we may then admire virtues

which belong only to a new community. I fancy one can live now in very nearly the old literary atmosphere of early New England by going to some of our small western towns. Here are the same freshness and the same lack of sophistication. In a characteristically supercilious passage Henry James speaks of this, and even if we resent it, it is true. "The very air," he says of America, "looks new and young: the light of the sun seems fresh and innocent, as if it knew as yet but few of the secrets of the world and none of the weariness of shining; the vegetation has the appearance of not having reached its majority. A large juvenility is stamped upon things . . . " Well, this sounds like James, but there is something in it. Dwight in his hymns ("I Love Thy Kingdom, Lord"), in his patriotic song,

> Columbia, Columbia, to glory arise,
> The Queen of the world and the child of the skies,

in his monstrous epic, in his "Triumph of Infidelity" (1788) (dedicated to Voltaire!), and even in his delightful "Travels in New England and New York" (1821-1822), is a pioneer in literature,—hardly more.

Such comments as these seem to gainsay the lines of David Humphreys (1753-1818), of Derby, on the land

> With genius unconfined,
> With polish'd manners and the illumined mind, . . .

The Connecticut child meets Humphreys first through his story of Putnam and the wolf. For a month during my boyhood I thought General Putnam the bravest hero of the Revolution and Humphreys its best story-teller—which, in one sense, perhaps, he was. Working recently on a pictorial history of American literature I included

a sketch of Putnam facing the wild-eyed wolf (in the sketch the beast was the size of a small elephant). Putnam was armed with a musket, while the rope which was to haul the hero to safety dangled from his leg. In this yarn Humphreys had good material for a story. It is difficult, however, to find anything so good in his verse essays.

One by-product of this study may be to suggest literary geography. When you come to Waterbury think of Trumbull; in New Haven remember Barlow; but to visualize Humphreys you must go to Derby. He was born there in 1753, and was at Yale with Dwight, Trumbull, and Barlow. Perhaps it was here (or in Derby) that Humphreys was deceived into thinking he could write poetry, for in spite of a distinguished career in the world, he was always returning to the Muse. He served under General Parsons and General Putnam, and he has come down to posterity as the aide-de-camp and friend of Washington. The commander-in-chief, in a letter to Franklin, complimented Humphreys on his "excellent heart, good nature, and acquired abilities . . . sterling integrity . . . sobriety, . . ." and other peculiarities. His stay at Washington's home in Virginia was responsible for the lukewarm epic, "Mount Vernon." After the war Humphreys joined the "Wits" in Hartford and helped to write the "Anarchiad." He was a member of the Connecticut Legislature; he served as United States minister to Portugal and to Spain; and he was generally a loyal servant of the nation. Yet impressive as this sounds, the absurd human mind is apt to linger over another scene in Humphreys's picturesque life: he is importing sheep from Spain to the old birth-place. For Humphreys had not done with Derby. Up the Housatonic he

sailed, the Jason of Derby, and if the fleeces of his sheep were not golden, at least the breed was the merino, and the Massachusetts Agricultural Society rewarded his zeal. Who would give up this picture of the poet returning to Derby amid his sheep?

Colonel Humphreys, however, did not limit his agricultural ventures to the soil. He rivaled Ebenezer Elliott in using poetry for strange purposes, for he made farming the theme of a poem. "A Poem on the Industry of the United States" suggests the sort of flowers that Humphreys plucked on Parnassus. His titles are not more wooden than the verse itself, which rattles like a pioneer wagon on a corduroy road. There is something overwhelming in these titles, in the catalogue of famous names, and in the high-flown patriotic sentiment. The "Poem on the Happiness of America" contains a winter-piece which, although inferior, may compare with certain passages in Whittier; or with the description of the snow-storm in recently published letters of the "American Farmer," de Crèvecoeur. The following, for example, is not unpleasant:

> Nor then, unjoyous, Winter's rigors come,
> But find them happy and content with home;
> Their gran'ries filled—the task of culture past—
> Warm at their fire, they hear the howling blast,
> With patt'ring rain and snow, or driving sleet,
> Rave idly loud, and at their window beat:
> Safe from its rage, regardless of its roar,
> In vain the tempest rattles at the door;
> The tame brute sheltered, and the feathered brood
> From them, more provident, demand their food.

Besides such poems Humphreys wrote "A Poem on the Love of Country," "A Poem on the Death of General

Washington," and "A Poem on the Future Glory of the United States." Most militant, most musical, most—from one point of view—melancholy was his "Address to the Armies of the United States." written in 1784 to exhort the patriots to stand firm. This poem enjoyed several editions, and was even more popular than his tragedy, "The Widow of Malabar." Requiescat!

A few others, less distinguished, completed the coterie of "The Connecticut Wits." In the summer of 1791 in Middletown two young men might have been discovered composing for their own amusement, a satire on the anti-Federalists, which was to be the first number of "The Echo." These were Theodore Dwight, brother of Timothy and father of another Theodore, a poet; and Richard Alsop. This work was to be part of "The Political Greenhouse," an attack on the Democrats for their sympathy with the French Revolution. Dwight, Richard Alsop, and Dr. Lemuel Hopkins were the authors of the satire. The elder Theodore Dwight was the historian of the Hartford Convention. Lemuel Hopkins (1750-1801) was a merrier soul, though it is difficult to be shocked, like some of his critics, at "his reckless levity of expression." Born in Waterbury, a student at Wallingford, and a practitioner in Litchfield and Hartford, he managed, it is evident, to entertain himself in his profession. Even serious poems on "Poland" and "Robespierre" are amusing Hopkins is naturally humorous, and the verses on the poor wretch with the excrescence,

> Which, gnawing on with fiery pace
> Devoured one broadside of his face

are admirable nonsense. This poem is in the form of an "Epitaph, On a Patient Killed by a Cancer Quack," and

develops briskly the theme of the fatal whelk. Let the first few lines suggest the clinical climax:

> Here lies a fool flat on his back,
> The victim of a cancer quack
> Who lost his money and his life,
> By plaster, caustic, and by knife.
> The case was this—a pimple rose
> South-east a little of his nose;
> Which daily reddened and grew bigger
> As too much drinking gave it vigor.

Dr. Hopkins dared to assert that tuberculosis could be cured; and that fresh air was beneficial for certain diseases. In spite of these eighteenth century heresies, or because of them, he became the foremost physician of Connecticut. He is potentially the subject of a study, for no one, I think, has collected all his easy-going poetry. If we read his jingles, we shall not regret that the old doctor neglected his professional duties to turn off a ballad or two.

We must pass over Hopkins's brother physician, the witty Mason Cogswell, to consider two other contributors to "The Echo." One of these is the learned Richard Alsop of Middletown, a linguist, a scholar, and bookish poet. His ambitious "Conquest of Scandinavia" remained unfinished. His "Monody on the Death of Washington," (1800) is the best of his historical poems. Alsop, like the other wits, was fond of Dr. Elihu Hubbard Smith of Litchfield, who is less distinguished for his occasional poems and his opera, "Edwin and Angelina" than for his compilation in 1793 of the first American anthology. Smith's poetry hardly warrants Alsop's apostrophe to inexorable death who should have "Passed thee, O SMITH, uninjured by," but his collection of the poetry of Dwight, Trumbull, Barlow, Humphreys, Hopkins, and

Alsop will retain historical importance. Such were the humble beginnings of American literature in Connecticut. The "Pleiades" have been dimmed by brighter stars, but in the West they accuse us of neglect. In a university three thousand miles away, they study "The Connecticut Wits." Their real significance, as we have noticed, was their establishment of a genuine literary society. They were imitative and uneven, but they prepared the way for a deeper and more original American literature.

Some of the wits lived on into the nineteenth century, but from now on the history of Connecticut's literature is not that of groups, but of individuals. By 1809 literature in America meant Washington Irving and New York; by 1840 it meant Longfellow and Cambridge. New York with its influence during the era of national expansion developed a real literature of the city. Boston, and its environs, with its older traditions and older university, produced the greatest American men of letters. Connecticut's interest in the political growth of the country and in the rise of learning was marked, but there seemed to be no focal point. Samuel Goodrich, like Washington Irving, was stirred by the western migration; Henry Howard Brownell, like Whittier, was inspired by the war; but these and others remained, as writers, isolated. Or, if they were not apart from a group, they were drawn to the larger centers of literary culture, so that we can claim only parts of their lives. Thus Fitz-Greene Halleck left Guilford to associate in New York with Paulding and Drake and Cooper. Or Amos Bronson Alcott became identified with the Concord school. Or distinguished writers, like Mark Twain, lived for a time in Connecticut unconnected with phases of thought which Connecticut can say were peculiarly hers. Thus the remainder of this

study can record no definite body of ideals which belong particularly to Connecticut. As the great humanitarian movements of the nineteenth century found their expression in America, as in Whittier's verse of abolition or Emerson's individualism, certain writers in Connecticut were swept into the current. With the re-discovery of America after the Civil War, Connecticut had its share in the vigorous influences which came from the West. About 1800 men spoke of the literature of Connecticut or of New York or of Massachusetts. Sectionalism was powerful. But as communication developed, as the new America after the war developed, writers were influenced by larger ideals than those confined within the boundaries of a state. Such facts must be remembered as we trace the histories of particular writers.

Likewise in the nineteenth century, another problem arises concerning the limits of the literature of Connecticut. Again and again Connecticut has known gifted writers through their four years at Yale, and then beheld them no more. Unlike Holmes and Lowell and Emerson, these sons of the college have not obligingly settled in Connecticut, but have scattered far and wide. "The Connecticut Wits" went only as far as Hartford, but others, Fenimore-Cooper, for example, returned to New York State and elsewhere, and to these places they belong. Is Nat Willis ours? I hardly think so, and I shall not enroll him among the writers of Connecticut.

Yet in their youth they were here. Their themes were often inspired by Connecticut. And at Yale we remember them by legend and memorial. Hence they shall be mentioned, though not more. If, then, we think of men of letters who have not returned to Connecticut, there comes to mind in the nineteenth century, in the class of 1813,

Augustus Baldwin Longstreet, later the author of "Georgia Scenes." "When at Yale," says John Donald Wade, his biographer, "Longstreet had frequently amused friends of his in New Haven by tales of Georgia and Georgians." At Yale Nathaniel Parker Willis wrote his "Scripture Poems." "Jaunty Nat Willis" went far in the light, popular literature of America, and he is the subject of a biography by Professor Henry A. Beers. Many others might be listed among the poets: Francis Miles Finch, creator of "The Blue and the Gray;" Robert Kelley Weeks, Charles DeKay, Lewis Frank Tooker, Robert Cameron Rogers, Arthur William Colton. Or we might name prose-writers such as Sylvester Judd, the author of the transcendental novel, "Margaret;" or Eugene Schuyler, the scholar and writer of short stories; or W. H. Bishop; or Clarence King, author of "Mountaineering in the Sierra Nevada;" or E. S. Nadal with his books of miscellaneous observations such as "Impressions of London Life" (1875), or "A Virginia Village" (1917).

Such a list is not complete, but merely representative of writers who have known and dreamed of literature while they were in Connecticut. Of all these whom we wish we might have kept, the most impressive is, of course, James Fenimore-Cooper (1789-1851). His sudden exit from the campus seems to symbolize his distaste for Yankees and for Puritanism. His novels never depict Yankees save in derision, and it would, therefore, be a rash act for Connecticut to claim the writer whom Thackeray designated as "one of the great prize-men of fiction." Yet Cooper's descendants have come to Yale; the best biography of him is by a Yale man (T. R. Lounsbury); and two volumes of his letters have been recently published by the Yale University Press. If Cooper does

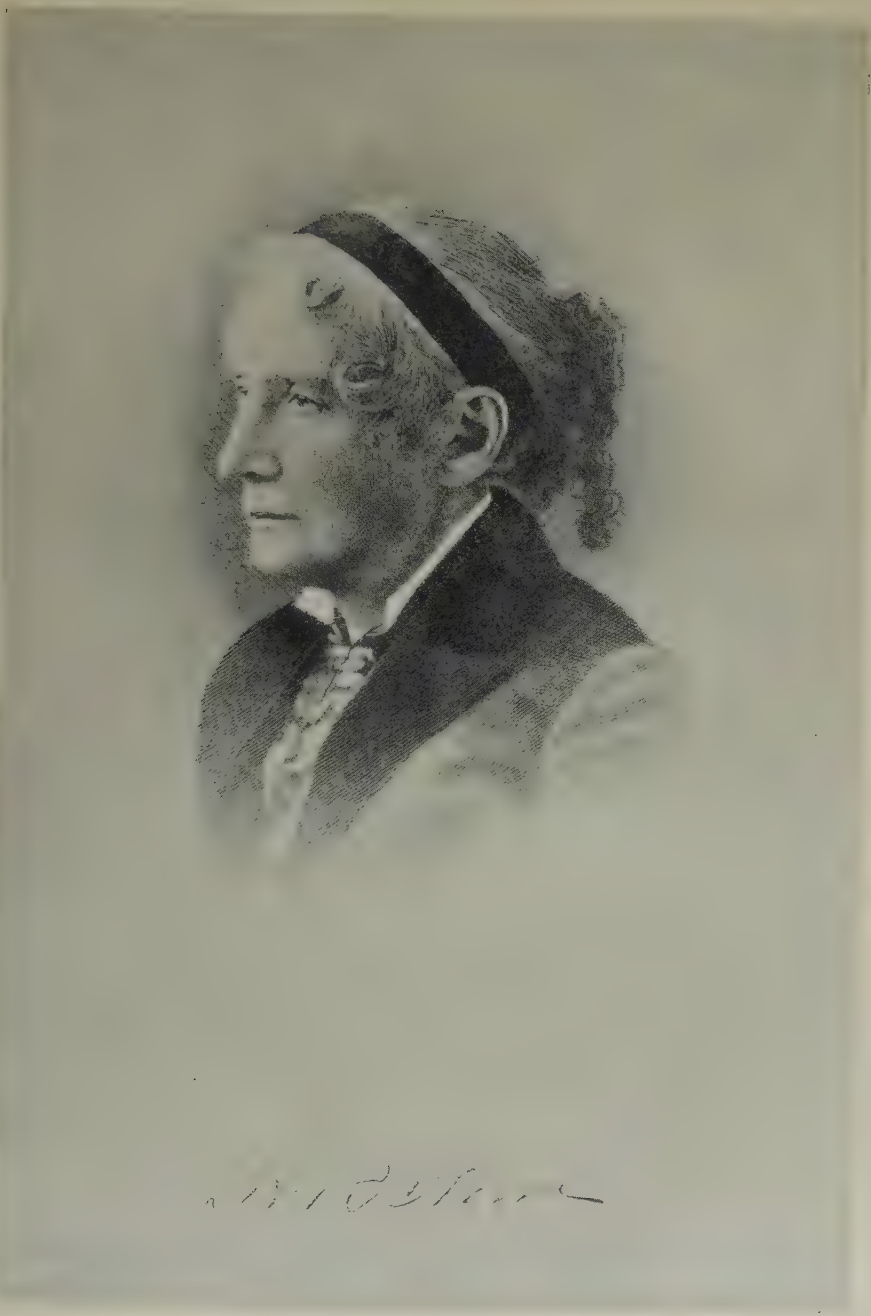
not belong to the literature of Connecticut, he is at least bound to it by close ties.

Such a study as this excludes also, necessarily, scores of other writers who were unconnected with Yale, or who were unendowed with great powers. Like a catalogue of the ships, passing reference must be made to some of these: William Ray, author of *Tripoli;* John Alsop, the brother of Richard Alsop; George Hill, with his "Ruins of Athens;" Edward A. M'Laughlin; Prosper Montgomery Wetmore; William H. Bradley; Asa M. Bolles; Norman Pinney; Joseph H. Nichols; Hugh Peters; James Otis Rockwell; Roswell Park; Jesse Erskine Dow; Ann S. Stephens; William H. Burleigh; Laura M. Thurston; Martha Day; Mary Ann Hanmer Dodd; Richard Bacon, Jr.; James Dixon; William T. Bacon; Ebenezer Porter Mason; George Shepard Burleigh; William Buell Sprague; Sylvester Graham; Joseph Bellamy. This list I have compiled from anthologies. None of these poets was represented in Stedman's "American Anthology," and the dates of some of them are unknown. The list is submitted, not to smother the reader, but to suggest the subsoil beneath the major poets of Connecticut. In the cases of later writers no attempt has been made, on account of still greater numbers, to chronicle the obscure. Yet such a list means a great deal. It suggests the extent of writing after 1800, and also the ridiculous judgment of some critics who made anthologies. It is well known that in certain later anthologies a poet like Poe is imperfectly represented, or even sometimes omitted.

Thomas Hooker might not have approved of "The Connecticut Wits," but he would have blessed the distinguished theologians and preachers who flourished, more or less in Connecticut, in the nineteenth century.

The writing of Horace Bushnell, like that of his compeer Channing, borders upon literature, and suggests Connecticut's association with the increasing liberalism of the age. Equally powerful are the orthodox sermons of Lyman Beecher, (1775-1863) whose greatest contributions, however, were his children Harriet Beecher Stowe (1812-1896) and Henry Ward Beecher (1813-1887). The orator of Plymouth Church is credited with twenty titles in a standard chronology of American literature. These include lectures and sermons and also some delightful essays upon secular topics. Yet Beecher as a writer, though charming, is hardly more than a journalist. The Beechers are, in spite of later wanderings, associated with Litchfield. Harriet Beecher Stowe spent her early years in Connecticut. Yet what state may claim "Uncle Tom's Cabin" (1852)—Maine, where it was written, or Ohio? For during the years in the latter state this woman of genius saw in the sufferings of fugitives the meaning of slavery. Because of this passionate book and quieter tales, like "Old Town Folks" (1869), Harriet Beecher Stowe belongs not to Connecticut, but to New England.

To history and to scholarship also, Connecticut contributed distinguished writers. On my shelves stand the twelve volumes of Jared Spark's (1789-1866) "American Biographies" (1834-1838; 1844-1848). Sparks was born in Willington. He became the editor of the "North American Review," chaplain of the United States House of Representatives, the biographer of Washington, and president of Harvard University. Later in the century lived John Fiske (1842-1901), born in Hartford, but associated with Harvard as a teacher of history and philosophy. His picturesque style in such books as "The Beginnings of



HARRIET BEECHER STOWE, 1811–1896

A native of Litchfield. Daughter of the Rev. Dr. Lyman Beecher, Yale 1797; sister of Henry Ward Beecher. A prolific writer; her chief work (1852) "Uncle Tom's Cabin," ranks in its influence as one of the greatest documents of human freedom.

New England" (1889) or "The American Revolution" (1891) won him like the greater Francis Parkman the title of "the magician with the pen." Such names suggest the number of writers who belong partly to Connecticut and partly to literature. But we must hasten on to the writers of pure literature, and to those who are certainly ours.

One of these is John Pierpont (1785-1866), who though minister of the Hollis Street Unitarian Church of Boston, is linked with Connecticut by ancestry, and education. Born in Litchfield, he was graduated from Yale. He was successively a tutor in South Carolina, a lawyer in Massachusetts, and a business man in Maryland. It was in Baltimore in 1816 that his "Airs of Palestine" was published. Pierpont was embarrassed by ill-health and a solemn piety, but he had the instincts of a poet. It is discouraging to realize how little Pierpont's travels meant to his poetry save sentimental moralizing on the past. The era before Mark Twain could not behold Europe without tears of sentiment. Yet this fault in Pierpont, a fault characteristic of his time, inspired his best verse. For he is most at home in the downright pathetic. He loves a fading cheek, a sad melody, and a new-made grave. He writes smoothly, and a few poems inspired by personal grief are beautiful. There is indeed a world of difference between his conventional "Obsequies of Spurzheim," and the stanzas on "My Child:"

I cannot make him dead!
His fair sunshiny head
Is ever bounding round my study chair;
Yet when my eyes, now dim
With tears, I turn to him,
The vision vanishes—he is not there.

We think for a moment of the anguish of Emerson in the "Threnody" on the death of his son, and the difference in the endings make us thoughtful. For Emerson turns to the new philosophy, while Pierpont ends with the characteristic Puritan talk of God's "chastening rod." The eight hundred lines of the "Airs of Palestine" are not by any means, as contemporaries declare, "faultless." They are monotonously regular illustrations of the favourite measure of the time, the heroic couplet. (How I long for a comment from Dryden or Pope or Waller or Cowley on these American heroics!) Apart from the monotonous couplets, the theme of this poem crushes the interest out of us and sends us back to the lyrics. For its subject, the influence of music, of which Pierpont seems to have been exceedingly fond, is illustrated interminably from sacred history. Pierpont was accustomed to write about his poetic theories. These poems, however, show merely a pious and immortal soul, which, let us hope, now comforts Pierpont for the mortality of his poetry.

James A. Hillhouse (1789-1841) is intimately connected with New Haven. His father was treasurer of Yale University for fifty years. An interesting reason for his success in this post is given by his son in the poem "Sachem's Wood." After describing his father's genial character he concludes:

> All brought him to his age so green,
> Stamped him so reverend, so serene,
> A stranger cried (half turning round,)
> "That face is worth a thousand pound!"

In Sachem's Wood, where new laboratories now dominate the scene, dwelt the poet, "occupied," says a biographer, "with the elegant pursuits of a man of taste and

fortune." Hillhouse was indeed a decorous ornament to the city and university. Born in New Haven, he had been graduated from the college four years after Pierpont, in 1808. Three years later, in taking the degree of Master of Arts, he had pronounced an oration called "The Education of a Poet" before the Phi Beta Kappa Society, the first of his various formal addresses. In 1812 he established a reputation by reading his poem called "The Judgment" (1821). Hillhouse lived in New Haven and at intervals in Boston, and he seems now to have been a kind of academic poet laureate, with an immense local reputation for stately, correct verse. Just a century ago "Nat" Willis, then a Yale undergraduate, was worshipping Hillhouse as his poetic ideal. What would an undergraduate in 1925 say to "The Judgment," "Percy's Mask" (1819), "Demetria" (1840), and the famous "Hadad" (1825)? The last poem still drones out its even, melodious periods in anthologies, but I shall hesitate before I assign it to a class in American literature. Yet Willis declared his acquaintance with Hillhouse was "the opening of a new heaven of imagination." "The intellectual and the gifted," says Rufus Griswold, who collected greedily details of the poet's life from the worthy and reverend Mr. Kipp, "claim him as one of their own sacred brotherhood." Possibly Mr. Kipp exaggerates, but Zachary Macaulay remarked that "he considered Mr. Hillhouse the most accomplished young man with whom he was acquainted." (In bestowing such praise did Mr. Macaulay except his own Thomas Babington?)

There is something in all this praise. This afternoon I have been reading "Hadad:" It is evident that Hillhouse knew Byron and Campbell; that he was a poet of books.

Hadad, a Syrian prince, a hostage in Jerusalem, is passionately in love with Tamar, the daughter of Absalom. The story is complicated; the characterization is weak; and there are strange sights and sounds, suggestive of Gothic romance. Sometimes there are demonic curses; sometimes the sound of rushing wings; sometimes the fragrance of ambrosial odours. A final scene indicates the temper of this play:

Hadad. Eternity!
O! mighty, glorious, miserable thought!
Had ye endured like those great sufferers,
Like them, seen ages, myriad ages roll;
Could ye but look into the void abyss
With eyes experienced, unobscured by torments,
Then mightest thou name it, name it feelingly.
Tamar. What ails thee, Hadad? Draw me not so close.
Hadad. Tamar! I need thy love—more than thy love—
Tamar. Thy cheek is wet with tears—Nay let us part—
'Tis late—I cannot, must not linger.
(*Breaks from him and exit*)
Hadad. Loved and abhorr'd! Still, still accursed!
(*He paces twice or thrice up and down, with passionate gestures; then turns his face to the sky, and stands a moment in silence.*)
O! where,
In the illimitable space, in what
Profound of untried misery, when all
His worlds, his rolling orbs of light, that fill
With life and beauty yonder infinite,
Their radiant journey run, forever set,
Where, where, in what abyss shall I be groaning?
(*Exit.*)

Such is the first real American poetic drama.

A less grandiose figure in the literature of Connecticut is John Gardner Calkins Brainard (1796-1828), whose

life and work centered wholly in Connecticut. In 1825 Brainard, who was born in New London, published in New York his little volume of "Occasional Poems." He had then been graduated from Yale for ten years, had been a member of the bar for six, and was known in Hartford as the editor of the "Connecticut Mirror." Three years later (1828) he was dead. The usual pious chorus hymned his virtues as a man (among them Whittier) so loudly, that it is difficult even now to judge him critically. Brainard was apparently a sensitive, melancholy spirit. His poetry differs slightly from the insipid sentiment of other nameless poets. It has also a particular interest in its concentration on American themes. Thus we may enjoy his poems on "The Connecticut River" or on "The Salmon River" or on "The Indian Summer" or even on "Qui Transtulit." He was a devotee of Cooper; there are verses on "Leatherstocking" and "Long Tom."

What we learn from poems like this on the Connecticut River is the hopelessness of finding before Bryant and Whittier descriptions of New England scenery. Except for a few lines these eloquent descriptions apply as well to rivers in California or Mesopotamia. Here are the time-worn phrases of the eighteenth century: "the gentlest dews"; "the mossed bank"; the gliding "silver streamlet." Here is the inevitable contrast of "tropic isles" and "stormy sea." Here, too, is the acknowledgment of the source in invocations to Oliver Goldsmith. The poets of Connecticut, like others in America, thought, until the awakening came, in terms of Collins and Akenside and Goldsmith. It was this which made Emerson tell us to foreswear "the courtly muses of Europe." Shall we

who have canoed from West Stewartstown, New Hampshire to Saybrook be contented with this:

> From that lone lake, the sweetest of the chain
> That links the mountain to the mighty main,
> Fresh from the rock and swelling by the tree,
> Rushing to meet, and dare and breast the sea—?

No—we must hear of Vermont scenes, and the villages of Massachusetts. "Salmon River" is better, for the poet mentions King Philip and Miantonimo. Yet the picturesque little tributary, with its wild oats and rail-birds, means only to this poet:

> 'Tis a sweet stream . . .
> By mossy bank, and darkly waving wood . . .

This is not criticism of Brainard, who is fluent enough. It is rather a text for the truth about American nature poetry: namely, that it did not really exist till Bryant wrote of the yellow violet and the fringed gentian and the black duck and the cold winter landscape of New England. Brainard's "The Indian Summer" has for its theme that of Bryant's "The Death of the Flowers," but his Indian Summer has little to do with those regions in which it is loveliest, Massachusetts and Connecticut.

Brainard, like all the rest of the poetic world, loved Lydia Huntley Sigourney (1791-1865), a native of Norwich, but the poetess of Hartford. In the history of American literature Mrs. Sigourney still requires an adequate critical biography. All we can do now is, like those pilgrims to her home, pluck a spray of lilac from the garden where she used to meditate. For Mrs. Sigourney, as everyone knows, was "the Felicia Hemans of America," with all that such a title means. Other sentimental literature hides its head before the exquisite Sigourney.

As we read her refined poetry we see the New England parlor with its souvenirs from Europe; its mezzotints of young ladies weeping by the grave of godly infants. In the Bible on the table are pressed rose-leaves, and near it are the gift-books and "Tokens." If the mistress enters she exhales the scent of lavender. In that locket on her bosom is, I wager, a daguerreotype of the long-lost lover and a lock of his manly hair. For this was the age of sentiment, and Mrs. Sigourney was its priestess.

At eight Lydia Huntley had begun that career in verse, in which she was to surpass, says a biographer, "any of the poets of her sex in this country in the extent of her productions." At twenty-four she had published her first volume, "Moral Pieces" (1815) and not long afterwards she was writing "Letters to Young Ladies" (1833), visiting tombs, and composing epitaphs. A few of her numerous titles tell of her aims in literature: "Poetry for Children" (1834); "Olive Buds" (1836); "Letters to Mothers" (1838); "Pleasant Memories of Pleasant Lands" (1842); "Letters to My Pupils" (1851); "Olive Leaves" (1851); "The Daily Councillor" (1858). I find myself, like others in this colder century, turning less and less frequently to Mrs. Sigourney's poem on "A Butterfly at A Child's Grave," or to the good counsel in "A Whisper to Bride," or even to "Water Drops." Mrs. Sigourney is perfectly at home in verse describing the death of an infant. Funerals and marriages stir in her a delicate melancholy. He must have been a cheerful bridegroom who heard at his wedding "The Widow's Charge at Her Daughter's Bridal":

> A mother yields her gem to thee
> On thy true breast to sparkle rare;
> She places 'neath thy household tree

The idol of her fondest care;
And by thy trust to be forgiven,
When judgment wakes in terror wild,
By all thy treasured hopes of heaven,
Deal gently with the widow's child.

Perhaps it was a lack of humour, more likely it was the pious mood of the time which infuses this sweet depression into seven volumes of poetry. Among the profane there were, of course, many jests. Mrs. Sigourney's tendency to write epitaphs at slender provocation caused a Hartford worthy to remark that death had a new terror. Some were fearful of travelling to Hartford in the same train with the poetess, lest, in the event of a wreck, they be made the subjects of obituary verse.

It is easy to jest about Mrs. Sigourney; about her sentiment and her isolation from real life. Or it is easy to avoid the issue, and commend her virtue and piety. She was a good woman. Many a soul has doubtless drawn strength from her religious poetry. If we are to judge this literature fairly, neither course is proper. Judged by real tests, which, after all, are ours in this essay, Mrs. Sigourney is neither amusing nor a great poetess. She is important solely as an index of her age. She represents clearly a provincial attitude of Americans towards poetry which was typical of the period between the wars of 1812 and 1861. She journeyed to Dryburgh Abbey and wrote a reverent poem on Scott. She visited Fredericksburg and wrote on the mother of George Washington. She viewed Niagara and found in it the "voice of thunder, power to speak of Him eternally." In brief, she admired without question or without realism what most Americans admired; she wrote in the metres which English arbiters declared fitting. Within these limits she had

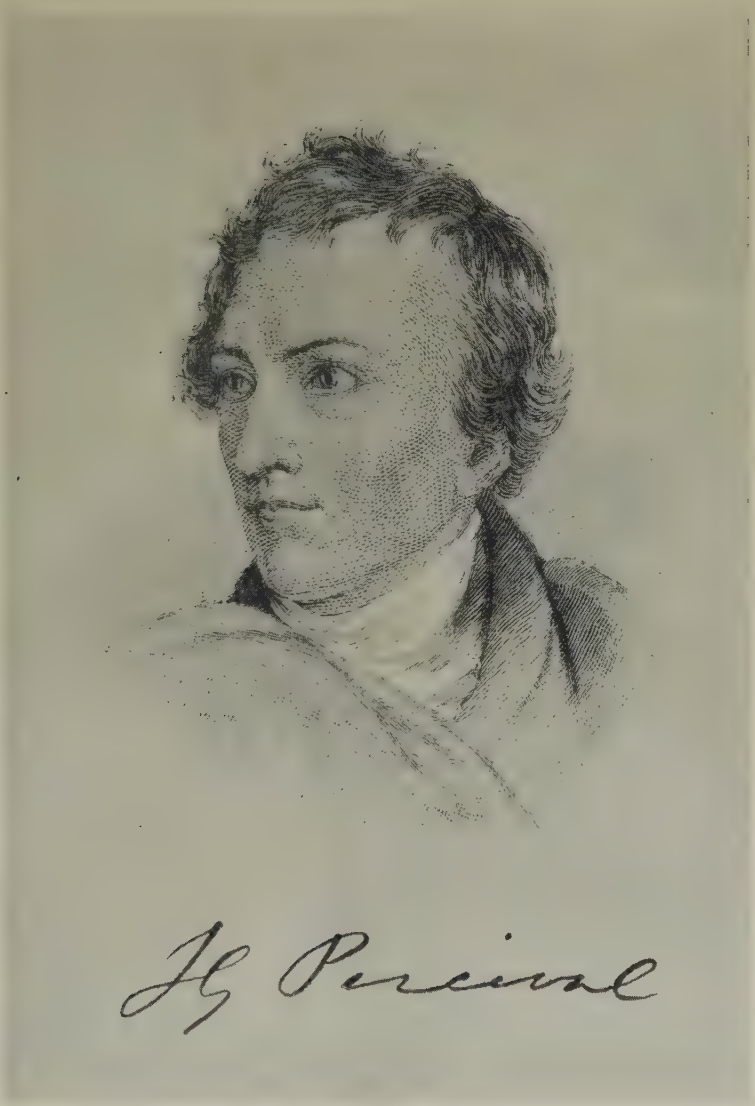
talent. "Niagara" has noble lines; it is far better than Brainard's poem on the same subject. "The Pilgrim Fathers" has dignity. But it was this very adherence to old standards without originality which made Poe cry out in these years, in despair for American poetry. The "courtly muses of Europe" once more! Not before the fearless voice of Whitman was this sentimental mood to be extinguished. Lydia Huntley Sigourney stands for the period of imitation and convention. After all, she herself said that Queen Victoria was "a sister woman."

At about the time that Lydia Huntley became Mrs. Sigourney a young Guilford man, recently come to New York, published with a friend a series of satirical poems which were the talk of the town. Fitz-Greene Halleck (1790-1867) is, in some ways, Connecticut's most distinguished poet. When he died in 1867, after a distinguished career, Bryant eulogized him, Whittier praised him; and a statue still stands in memory of his fame. The statue, however, is in Central Park, and the best part of Halleck's life was spent in New York, as indeed his best poetry was written under the influence of Knickerbocker literature. Still, for approximately the first twenty-one and for the last eighteen years of his life he lived in Guilford. In the venerable village stories —interesting ones—still survive. Walk into the cemetery, through the avenue of pines, and pause before Halleck's monument on which are written the lines he composed in memory of the youthful Joseph Rodman Drake:

> Green be the turf above thee,
> Friend of my better days;
> None knew thee but to love thee,
> Nor named thee but to praise.

The story of Halleck is at last being accurately written (by Nelson Adkins, of New York University). Halleck is an example of talent which flourished in a literary group. The satirical poems were the "Croaker Papers" (1819) which appeared in the "Evening Post." In 1819 Halleck composed "Fanny," a humorous satire of some fifteen hundred lines. He is, however, best known for single poems, "Alnwick Castle," a romantic poem, half-serious, on mediaeval life; "Burns," "Red Jacket," and the declamatory "Marco Bozzaris." In the intervals of his life of business Halleck fraternized about old New York with Drake and other Knickerbockers, reading Thomas Campbell and Walter Scott. Halleck won the praise of Washington Irving. After his retirement to Guilford in 1848 his creative powers ceased. "Connecticut," the poem which should perhaps interest us most, is uninspired. One is tempted to think Halleck an instance of genius educed by literary society, and it is difficult to believe that he would have written his best poetry, had he never left Connecticut. Never highly original, under the influence of the Knickerbockers he wrote in imitation of Scott and the other romantics. Sometimes as in "Marco Bozzaris" and "Alnwick Castle," his enthusiasm flamed into a fiery eloquence. Halleck at his best writes stirring poetry, but he is the product not of the country village but of the city.

Much closer to us, though less known, is the bookish prodigy, James Gates Percival (1795-1856). I am tempted to pause long over the work of Percival. He belongs so definitely to Connecticut; his life is so unique; and in moments he is so unmistakably a man of genius. Neglect of Percival cannot long continue. Tributes to him, like Whittier's, are amusing: "God pity the man who does not love the poetry of Percival." But one hears fre-



JAMES GATES PERCIVAL, 1795–1856, YALE 1815.
A native of Kensington. "He read ten languages with fluency, was a philologist, geologist, botanist, musician and poet." Dr. Stokes says of him that he was "one of the most talented and erratic of the Sons of Yale."

quently of individuals who have re-discovered him. The second part of Whittier's enthusiastic comment is true: "He is a genius of Nature's making—that singular and high-minded poet."

A student of Percival who has recently done much to rescue him from obscurity is Doctor Herbert Thoms of New Haven, and his monograph on Percival will be my authority for much which I shall say here. Doctor Thoms' essay begins with the incident that has interested many readers of old American magazines. A curious picture, whose duplicate now lies on my desk, was published by George P. Morris, in the "New York Mirror." This picture was called "Nine Living American Poets." In an oval are the portraits of eight American poets: Bryant, Irving, Pierpont, Halleck, Sprague, Pinckney, Woodworth, and Brooks. These cluster about a ninth picture, that of Percival. This journalistic gesture had meaning. Everywhere in the letters and gossip of the time we hear of Percival. Not only was his poetry well known, but his personality puzzled his contemporaries. "He is," said Nat Willis, though with characteristic exaggeration, "the most interesting man in America."

Ward's life of Percival is unreliable. The poet was, apparently, born in Kensington in 1795. He entered Yale in 1811, where he lived as a free and original spirit. One habit of his in respect to his poetry has not, I think, been since repeated. Stealing from his room in Connecticut Hall he posted his verses in some one of the college buildings, and then eavesdropped for comments. This is surely an unusual way of securing that frank criticism which all of us request, but none of us desires. I shall not chronicle all the vagaries of his life: his poetical "Imprecation" against Hartford; his ill success as a physician,

and as a lover, and as a lecturer in the South; his failure also as a Phi Beta Kappa orator. There are dramatic scenes: we see him in a fit of melancholia on his way to Middletown to purchase a pistol. This pilgrimage to the river-city for the purpose of settling his problems did at least produce a poem, "The Suicide." Or we see him after a lecture at West Point, where he was a professor of chemistry, writing: "Sir, it will never do. I am no chemist." (Courage, professor! This is the normal mood after a lecture!) Or James Fenimore-Cooper rescues him from a miserable tenement in New York. Or, most extraordinary, we see him reluctantly admitting Longfellow to his anchorite quarters in the New Haven hospital. "In one of the three rooms," says Doctor Thoms, "were the library and minerals of the poet-geologist, in another his study, and in another his bedroom. His bed was a simple cot with a block of wood under the head of the mattress to serve as a pillow. Two very dirty woolen blankets covered the bed. There were no sheets. While living here his movements were often inexplicable. He often used to leave without warning and might be gone days or even weeks at a time, no one knew where. At one time he stated that there was not a square mile in Connecticut which he had not traversed. A favorite place with him was Mount Carmel, another was The Hanging Hills in Meriden."

All these peculiarities were the expression of a temperament which would have interested a modern psychiatrist. He was neurotic, a victim from boyhood of depression. In other words, he shared with greater men "the sorrowful gift of genius." No one can read his poetry carefully without feeling the difference between his nature and that of, say, the mild Brainard. He was strung up to a fine

response, and though the absurd words of Willis of him —"the purest and the most mere man of genius possible to our race"—antagonize us, his intense reaction to life made him the author of a few remarkable poems, even if he had, as Lowell said, "defeat worked into his very constitution." Nor must we forget that though his powers scattered, he won from his dozen vocations a permanent reputation as a geologist. The judgment of James D. Dana should be final: "In the expression, Percival the Geologist, few will recognize a reference to Percival the poet: and yet in my opinion, no one in the country has done better work in Geology or work of greater value to the science."

Percival's poetry, like his life, was uneven. Yet it never, like other poetry in our study, descends to bathos. His point of view is less conventional, and he owns the gift, rare in those days, artistic restraint. "To Seneca Lake" differs from the dozens of American poems on lakes in the absence of superlatives. Percival really had also that quality which the anthologists ascribe with equal enthusiasm to Brainard or Mrs. Sigourney—imaginative power. "The Coral Grove," with its unusual subject and its vivid lights and colours, proves his distinction. No other poet in America, in my judgment, could have even conceived it. Its pictures of the strange marine life are unequalled unless in the poem which it resembles, Matthew Arnold's "The Forsaken Merman," who dwelt in

> Sand-strewn caverns, cool and deep,
> Where the winds are all asleep.

Percival catches perfectly the mood which we feel so seldom, unless it be at Catalina or in the Bermudas, the mood of the still, mysterious life on the floor of the sea:

The water is calm and still below,
For the waves and winds are absent there,
And the sands are bright as the stars that glow
In the motionless fields of upper air:
There, with its waving blade of green
The sea-flag streams through the silent water,
And the crimson leaf of the dulse is seen
To blush, like a banner bathed in slaughter:
Then with light and easy motion,
The fan-coral sweeps through the clear, deep sea;
And the yellow and scarlet tufts of ocean
Are bending like corn on the upland lea.

The tragedy of Percival was that of a high endowment unsupported by singleness of purpose. He has all the charm of the wayward, gifted mind. His whole story has not yet been told. "I know" he says sadly, "not how it is, but I cannot rest: I am eternally harassed by the fear that darkens the future. I sometimes wish intensely that I could find some fairy pilot to guide me on to my destined haven."

As the century advanced, both poets and prose-writers became more numerous. We can only notice in passing such poets as Henry Clay Work, George D. Prentice, Emma Hart Willard, or even Rose Terry Cooke. Work, born in Middletown, composed "Marching Through Georgia" and the inscrutable piffle of the popular ballad, "Father, Dear Father, Come Home with Me Now." George Denison Prentice, of Preston, later editor of the Louisville "Courier-Journal," was the author of tearful lyrics. Emma Hart Willard, born in Berlin, contrived to write, in addition to text books, "Rocked in the Cradle of the Deep." Rose Terry Cooke, whose dialect stories were praised by Whittier, lived during the first part of her life in Hartford. Stedman included in his anthology several

of her poems, but she is better known for her short stories of New England life.

The poetry of all these is faint compared with the distinctive work of Henry Howard Brownell (1820-1872). Theodore Winthrop and Brownell are our two lyrists of the Civil War. Brownell was born in Providence, but he was graduated from Trinity College, and his later life was passed in Hartford. In the first years of the war, a poem of his interested Farragut who appointed him acting ensign on the "Hartford." So during the battle of Mobile Bay, Brownell was observed by the soldiers jotting down notes with characteristic coolness. Later, Farragut was to write him: "I have always esteemed it one of the happy events of my life that I was able to gratify your enthusiastic desire to witness one of the grandest as well as most terrible of all nautical events, a great sea-fight." The result of this experience was, among others, the clarion lyric, "The River-Fight." Brownell's existence after the war was tranquil except for the terrible disease which ended his life. He journeyed about the world with Farragut, but his happiest hours were spent on another "Hartford," a cat-boat in which he sailed over the waters of Narragansett Bay. Brownell's verse lacks finish. Like Whittier's, his poetry of the war carries us away by its enthusiasm. He is a ha-ha among the trumpets. He belongs obviously to the rather small group of martial poets which the Rebellion inspired, (Timrod or Hayne or Stedman) but he is more intense than any of these.

Theodore Winthrop (1828-1861), of New Haven, fell at the battle of Great Bethel in 1861, the first Northern officer to die in the Civil War. Winthrop was only thirty-three at the time of his death and he has been canonized as the chivalrous and romantic soldier. Rightly, for his

life-story proclaims that he was a dreamer and a gallant spirit. "For one moment," says George William Curtis, "that brave inspiring form is plainly visible to his whole country, rapt and calm, standing on the log nearest the enemy's battery—" Every event in Winthrop's life seems now to have pointed towards the happy fate of the good who die young, of those who never see in middle life and old age the sun go down in weariness. At Yale he cared for the things of the intellect. Later he travelled, in Europe, and in the Columbia River country with an Indian guide. He had even written a poem which seemed to foretell his own death in action. He reminds us in this generation of Alan Seeger or Rupert Brooke.

The wave of admiration which swept over the country brought Winthrop's writings from manuscript, for before his death practically nothing of his had been published. In these novels such as "Cecil Dreeme" (1861) or "John Brent" (1862) or "The Canoe and the Saddle" (1862), even if we forget his story, we feel once more the buoyancy and courage and charm of his nature. Speculation about his promise is idle. Professor Beers speaks of the resemblances in "Cecil Dreeme" to the art of Hawthorne. As we pass his grave in the Grove Street cemetery in New Haven, we recall his life, given not cautiously but with joy in peril and romance. He lies only a few steps from the memorials to those other Yale men who died in the war against Germany.

Brownell died in 1872; Winthrop in 1861. During the latter part of the century Connecticut was represented in poetry chiefly by Edward Rowland Sill (1841-1887), of Winsted, a shy genius, and Edmund Clarence Stedman, known as a true servant in the cause of literature. An interesting picture of Sill is given in Henry Holt's re-

Your faithful friend
Elihu Burritt.

ELIHU BURRITT, 1810–1879

A native of New Britain. Pursued his studies while working at the forge, mastering many languages; called "The Learned Blacksmith." One of the first persons of any country to work for World Peace which he advocated as early as 1845.

cent book of reminiscences. Besides the personal impression there is the delightful story of his being sent away from college because of his remark to a tutor: "I don't scan, sir." Sill also wrote a poem on morning chapel which the Yale undergraduates of today might appreciate. After apprenticeships in various trades and after teaching in Ohio, Sill was Professor of English Literature for eight years at the University of California. He was a somewhat erratic person. He never gave up the attitude of liberalism which he had adopted in Yale, under influences which hardly seem rebellious today, among them that of Thomas Carlyle. In this respect, though he retained his love for Yale, he could not tolerate her orthodoxy. On December 27, 1885 he writes Holt: "Probably you do not share my contempt for Yale College as an apparatus of liberal education. I have but a feeble interest in it, or hope of its ever being anything but a sort of old woman's college—a nunnery of the church."

Sill was an ardent, rather wistful spirit. He never compassed a definite performance in literature, but a few poems reveal his intensity of feeling. Some of these have a mood of longing after some unrealizable experience, not unlike that of the mystic. Yet Sill was no mystic. He seems rather, as in the poem called "The Prayer," to have been a searcher after reality. I have heard him compared with Matthew Arnold and John Sterling. My own parallel is rather Arthur Hugh Clough, whom he resembles in his diffidence, his strength, and his quest for truth. Like Clough's, his love songs have an intellectual turn. No really critical life of Sill exists.

Two great volumes, however, celebrate the life of Edmund Clarence Stedman (1833-1908). Although born in 1833, Stedman died less than a score of years ago, and

he seems a modern figure. Like Cooper and Sill, Stedman withdrew from Yale at the urgent invitation of the faculty. The renegade was to receive rarer degrees from his alma mater: an M. A. in 1871, and in 1894 an L. L. D. In 1901, at the Yale Bicentennial, he read his "Mater Coronata." If we add Lowell and Poe to the list of those who left college suddenly, insubordination seems almost the direct route to literary success. Stedman was born in Hartford, and passed his childhood in Norwich. Here and in New York he worked on newspapers. From New York he left for the front as a war correspondent. He had already published a volume of poems (1860), but his most enduring work was done after he became a member of the New York Stock Exchange. "Pan in Wall Street" indeed!

Stedman's modest inclusions in his vast "American Anthology" (1900) of a few poems of his own hardly do justice to the writer who must rank with Thomas Bailey Aldrich as one of the distinguished poets of the later nineteenth century. Here are "Pan in Wall Street," "The Hand of Lincoln," and the stirring legend of "Kearney at Seven Pines." Yet Stedman's fame will rest rather on his achievements as an editor and critic. Neither he nor Sill nor Aldrich cared as poets for the rising voices of Whitman and Harte, or for the robust chorus which sounded beyond the Mississippi. They were nourished in the traditions of Tennyson and the other Victorians. The voice of the new America was the voice of the Whitman. I have been told that Stedman's diversion into the field of criticism was due partly to this. In any case, if as a poet he was the representative of by-gone traditions, as a critic he was our master-builder. With vast labour he collected poems for his anthologies, the "Victorian Anthology,"

(1894) and the "American Anthology." The latter has been my constant companion in writing this essay, as it must be that of all students of American literature. Conjoined with these he published his volumes of criticism: "Victorian Poets" (1875) and "Poets of America" (1885). He helped to place on a sounder basis the scholarship of American literature. For all this Stedman laboured —and died poor. He was, of course, far too deeply absorbed, for the good of literature, in public life. Among the records of his services are the Dartmouth "Commencement Ode" (1873), and his lectures at John Hopkins on "The Nature and Elements of Poetry" (1892). We lament this spattering, and think him unproductive. Then we recall the monumental anthology, "A Library of American Literature" (1887-1890). Stedman was tireless, and he was a genuine man of letters.

Again we must yield a writer to Massachusetts. Amos Bronson Alcott (1799-1888) was born in Wolcott, and he did not remove to Boston till 1828. I never pass the school in Cheshire that I do not think of his years as a teacher there. Yet he belongs irreclaimably to Concord. His best poetry bears the significant titles: "Emerson," "Margaret Fuller," Thoreau," "Hawthorne," "Wendell Phillips." No, the "potato-Quixote," as Carlyle called him, belongs to the vicinity of Boston. For a different reason we must give up Mark Twain. For some twenty years he was associated with Hartford. His closest friends were Charles Dudley Warner and Joseph Twichell, who had the honour of being "Harris" in "A Tramp Abroad." Here Howells came to see Mark Twain. Redding is still the Mecca for his admirers. But Samuel Clemens was born on the *west* bank of th Mississippi, and western at heart he remained.

Stedman and Alcott and Mark Twain were prose-writers, but we must glance particularly at the essays written by Connecticut men during the century. I have up to this time omitted Samuel Griswold Goodrich (1793-1860) because he seems to me in many ways a precursor, however inferior, of later essayists. In spite of the trash in his astounding output of one hundred and seventy volumes, in spite of the one hundred and sixteen books by the famous "Peter Parley," Goodrich could, if he chose, write with power on books and kindred subjects. In his "annuary" appeared some of Hawthorne's "Twice-Told Tales." He dates far back into the pre-war days, for he was born in Ridgefield in 1793. In publishing, in travelling, in the Massachusetts Senate, in his poems, he is the typical magazinist and literary patron of the age, prolific and commonplace, but today an admirable mirror of the times.

In contrast, then, we think of the essayists who possessed all that Goodrich lacked: restraint, finish, deep culture, and artistic principles. Donald K. Mitchell ("Ik Marvel," 1822-1908) and Charles Dudley Warner (1829-1903), who lived in Connecticut for parts of their lives, attest the change in literary ideals since 1860, the year of Goodrich's death. The admirable life by Professor Waldo H. Dunn of "Ik Marvel" is too recent to permit me to recount the history of Marvel's experience at Yale, abroad, or, more particularly, during the contemplative years at Edgewood, just two miles from Yale College. His story is told minutely and charmingly in Mr. Dunn's biography. As we finish reading it we turn once more to the "Reveries of a Bachelor" (1850), with its gentle, retrospective musings; or to "Dream Life" (1851); or to "Wet Days at Edgewood" (1864). Here, we think, is the

true spiritual descendant of Washington Irving, whose ancestors were Addison and Steele. Here is the mood of the essayist in perfection. Yet we must not deceive ourselves. Thackeray said that it was good that there should have been a Willis, and we may apply his remark to Mitchell. For Mitchell is being forgotten. His very dream-like quality betrays him. As an essayist he lacks the stimulus of Lowell, or the colour of Hawthorne, or the vivacity of George William Curtis. And when the greater English essayists come to mind, we are sure. We see that, however charming, "Ik Marvel" will not outlive Irving or Lowell.

Charles Dudley Warner, born in Pittsfield, Massachusetts, is linked with Hartford. He was a miscellaneous writer, an economist, a philanthropist, a journalist. As an essayist he fades as does Marvel, but he is a writer of far more fibre and more earthy humour. "Everybody," he says in a much quoted phrase, one which explains Mark Twain's liking for him, "is talking about the weather, why doesn't somebody do something?" He is quaint, whimsical, and kindly. The generation which is now leaving the stage was very fond of him, so that their sons have an acquaintance with Warner at second-hand. The next best thing to being brought up on a farm, an old gentleman told me, is to read Warner's "Being a Boy" (1877). "The true form of his art," said Howells, just after Warner's death, "was at its best in the series of essays which preceded his fiction. 'My Summer in a Garden,' 'Backlog Studies,' 'Saunterings,' 'Adirondack Sketches,' 'Baddeck, and That Sort of Thing.'" Charles Dudley Warner is still a kind and tranquil presence in the minds of those who knew him.

And so we come to the end of the story. No city in Con-

necticut has today a group of distinguished writers. The literary centers of America are scattered, and sooner or later the lovers of books find their way to the cities. We must except the few, whom I shall not name here, who come to the lovely hills of Litchfield County to write; or those who haunt in the summer our coast. About our colleges and in our cities and villages are writers of books. I shall name none of them, for who shall judge these novelists and poets now? Nor shall I become proprietary and speak proudly of the achievements of Connecticut in literature of the past; or hopefully dilate on the future. If you have followed this story of Connecticut's literature, you know that there is no fear that Trumbull and Percival and Stedman will not live again in other minds. I shall only mention one name, the name of a scholar and man of letters who has seen so much of this pageant which I have described so inadequately. Of men now living he who deserves most the honour of Connecticut for scholarship and literary achievement, is Henry A. Beers.

Let us not guess about the future, but rather muse on the past. Last night as I wrote the final words of this essay, I sat back in my chair and looked about my study. The firelight fell across my shelves, and I saw dimly the old volumes of the worthies whom I had beckoned back to live again so briefly. They were mute, expressionless, yet I fancied that beneath their Puritan brown they were amazed that I had called them forth. As the fire flared up, I saw their names once more: "The Columbiad," "The Conquest of Canaan," "M'Fingal," "Airs of Palestine," "Hadad," "Moral Pieces," "Fanny," "Battle Lyrics," "Cecil Dreeme," "The American Anthology." Judged by the touchstones of the nobler English literature, how

Birthplace of Noah Webster, West Hartford, Conn.

weak they are! Yet I fell to thinking of the Commonwealth from which they came; its antiquity and its honour. I thought of the crude civilizations in its beginnings; of its growth, its triumph. Most of all I thought of the aspiration of these men and women who in spite of sadness and poverty and discouragement, had wrought from their books and thoughts and dreams the literature of Connecticut.

A CELESTIAL ENCOUNTER

By Earnest William Brown

Mathematician; born Hull, England, November 29, 1866; son William and Emma (Martin) B.; B.A., Christ's College, Cambridge, England, 1887, Fellow, 1889–1895, M.A., 1891, Sc.D., 1897, Adams prize, 1907, Honorable Fellow, 1911; (Honorable A.M., Yale University, 1907; D.Sc., Adelaide University, 1914); unmarried. Professor mathematics, Haverford (Pa.) College, 1891–1907, Yale, 1907. Fellow Royal Society (Eng.), (Royal medal, 1914), Royal Astronomical Society (Gold medal, 1907); member London Mathematical Society, Cambridge Philosophical Society, American Philosophical Society, American Mathematical Society. (President 1914–1916) American Astronomical Society. (Vice-President 1924) A. A. A. S. (Vice-President sect. A 1910), American Alpine Club; Fellow American Academy of Arts and Sciences. Club, Graduates. Author: Treatise on the Lunar Theory, 1896; A New Theory of the Moon's Motion, 1897–1905; also many papers on lunar theory and on celestial and general mechanics. Formerly editor of transactions American Mathematical Society and of Bulletin American Mathematical Society; associate editor Astronomy Journal. Address, 116 Everit Street, New Haven, Connecticut.

ON the morning of Saturday, January the twenty-fourth, 1925, the State of Connecticut suspended its daily life for half an hour in order to see the most striking spectacle of the skies—a total eclipse of the sun. From factories, stores, offices, banks, schools, colleges, hundreds of thousands of men, women and children were collected on roofs, at windows, and in the open. Other states poured their tens of thousands into the shadow track by automobile, trolley, and railroad. A dirigible and many airplanes sought special views aloft. Photographic cameras and radio sets were in operation in uncounted numbers and ubiquitous news reporter lost no phase of the situation. In a few favored spots small handfuls of astronomers were working quietly but at high speed to learn more about the heavens.

The stage was set some four years before when the Nautical Almanac Office at Washington, which is entrusted with the duty of furnishing predictions of the positions of the heavenly bodies, announced that the moon would hide the sun from a small portion of the earth on that morning, and that the shadow track would cross nearly the whole of the State. It foretold the northern and southern limits of this track within a mile and the time at which the shadow would arrive within a second or so, and no responsible astronomer doubted the prediction any more than he doubted the daily rising of the sun. He started in with his preparations for observing the event with full confidence that it would occur according to the prediction. The only doubt was whether the fickle atmosphere would permit him to see what was taking place beyond the earth. His brother, the meteorologist, has not yet succeeded in advancing his science to the

point where the behavior of the air can be foretold long in advance. Only the chance for good weather can be given and that chance must be taken.

Eclipses of the sun are not rare events. At least two occur every year and there may be as many as five. But a considerable proportion of these are only partial, that is, at no spot on the earth is the sun completely covered by the moon at any moment during such an eclipse. A total eclipse occurs nearly every year but the part of the earth from which the sun is completely hidden is only a narrow track not more than a couple of hundred miles wide though it may be some four thousand miles long. At the most favorable time it will only cover about one hundredth part of the earth's surface, and in most cases the area is much smaller. The result is that any particular spot on the earth will only be visited by a total eclipse on the average once every few centuries. According to the records, Edinburgh has had five total eclipses in the last thirteen hundred years, while London has not had more than two. The danger of setting a precedent, which was voiced by a teacher in one of our institutions when it was proposed to suspend the exercises for the present occasion, is certainly not one which need cause any serious alarm.

The Track of the Shadow

In the eclipse of January 24th, 1925, the band of totality, as the area from which the light of the sun is completely excluded is called, started at sunrise somewhat to the west of Duluth, a city placed very near its southern border. From there the shadow travelled at over a mile a second towards the east and a little to the south, crossing the northern parts of the State of Michigan, the province of Ontario, entering New York State with Buffalo on

its central line. Thence, gradually slowing down to some fifty miles a minute, it covered nearly the whole of the State of Connecticut. It then passed out into the Atlantic Ocean, getting as far south as latitude 40° where it was travelling about half a mile a minute. Moving north again with increasing speed, it ended at sunset in the sea to the north of Scotland.

The whole time of its passage across the earth was less than two hours, the six hours difference of time between the places where it was first seen and where it disappeared accounting for the fact that it appears at sunrise in one place and ends at sunset in another. The daily rotation of the earth from west to east causes the State of Connecticut to travel about 12 miles a minute. The shadow travelled in the same direction but much faster. If the moon took three months, instead of one, to get round the earth, the shadow would stay in the same place on the earth for a considerable part of the day and that spot would be the only place from which an effective view could be obtained.

The State of Connecticut was more highly favored for the observation of the eclipse than any other part of the land. The sun was higher in the sky — about 18° above the horizon — the time of totality longer, being some two minutes, and the chances for fine weather were nearly fifty per cent. In the middle of the Atlantic Ocean the sun was twice as high, but the time was only longer by half a minute. For the ordinary spectator the view there would be as good as on land, perhaps better if he were reasonably free from bodily discomfort.

But for the astronomer the ocean is almost out of the question. The latter now does nearly all his work by photography and he needs a steady platform for his in-

struments if he is to keep them pointed at the sun during the exposures. It was not strange, therefore, that observatories all over the country sent representatives to this State to obtain records which could be studied at leisure. Most of them placed their instruments either on the grounds of the Yale University Observatory in New Haven or in the buildings of the Van Vleck Observatory of Wesleyan University, in Middletown. For the astronomer it is usually all or nothing. Those who came took the chance of having fine weather and were rewarded by skies which will make this eclipse one of the most famous in all history. Some of them had been to California in September, 1923, where the chances for cloudless views were nearly a hundred per cent, only to be baffled by a storm which prevented any observation of the sun. One or two parties, however, had taken their stand in northern Mexico with much poorer chances of fine weather and had the good fortune to secure complete records owing to a break in the clouds which occurred at the critical moment.

Organization

Such were the facts in the possession of astronomers well ahead of the time when the event would occur. What was the best use that could be made of them? A total eclipse of the sun is chiefly important because it is only then that that wonderful fringe of light surrounding the sun and known as the "corona" can be seen. In the last few years a new significance has been added on account of one test of the Einstein theory which can only be made at such a time. But there was another factor in the situation which seemed to demand consideration. A striking natural phenomenon is no longer an event to be regarded

with fear and trembling. A certain degree of education has reached the mass of the people and here an opportunity to teach the ways of science to multitudes at one time was presented in such a fashion that it could be utilized for further instruction. It is doubtful if any previous eclipse has been visible over such a thickly populated area, but it is quite certain that none has ever been seen by so many millions capable of understanding the meaning of the phenomenon.

A further question arose. Could observations of value to astronomy be made by those unaccustomed to observe and without special equipment? If so, the educational value of the event would be greatly increased by the preparations which many would make. They would try to find out what to look for, where to go, and what to do. The added interest created by a share in the observational work would be great.

The astronomers of America, like scientific men in every civilized country, are members of an association devoted to furthering the interests of their subject, and known as the American Astronomical Society. This body meets once or twice a year in order to tell and learn of the progress that has been made and to discuss various astronomical problems. Whenever an important eclipse is to occur, a committee is appointed to co-ordinate all activities in connection with it. This committee is in no sense a governing body to dictate what shall be done; it is merely a gathering point for information and discussion, so that the most effective results may be obtained. When the time came to appoint the committee for the 1925 eclipse the society felt that something more should be done than merely to secure the best results for astronomy. In view of the general public interest in the subject, the

spectacular character of the event, and the fact that it could be seen by many millions without leaving their abodes, a subcommittee was formed which had the special duty of seeing that the public should be given accurate and full information concerning the event. Since the writer, who was the chairman of this subcommittee (the "sub" was usually dropped for the sake of brevity), was a member of the staff of Yale University, its activities naturally centered in New Haven.

Much astronomical work now-a-days is done by observations in large masses. The difficulties of making some of these observations are so great that it is only by taking very large numbers of them and averaging the results anything new can be learned. The society considered whether a similar idea might not be used with respect to the millions who would see the eclipse. Was there not some observation which an ordinarily intelligent person without special equipment or special knowledge might make? And by thousands of such observations could not results be deduced which would help to advance the science? It concluded that not only could this be done, but that there were various sides which could be taken up by more highly trained people who had, however, no specialized knowledge in astronomy. It therefore added to the words "public information," which gave the first duty of the committee, the words "and co-operation." A certain further duty was laid on this committee of the observations which the public were asked to make would, if successful, assist in determining with great accuracy the position of the moon at the time of the eclipse. In order to make the best use of this position it was necessary to observe the moon for at least a month before and a month after the event, so that its path might be laid

down with the greatest possible accuracy during that time. A campaign was therefore undertaken to ask observatories all over the world to make such observations.

The idea of obtaining the interest and co-operation of the public was not altogether new. It had been proposed and discussed, at least in private, on other occasions of a similar character. But, as far as the writer knows, this was the first time that a determined campaign had been started by a body of scientific men to interest the people in a scientific event, to describe it in language which could be understood by everyone, to explain what might be seen and how best to see it, to secure the co-operation of various public services to attain these ends and to assist in the purely scientific investigations, and generally, to attempt to reach, not only those who would naturally be interested, but also the great mass of the people who rarely have the work of the scientific world brought home to them in a manner which shall leave a lasting impression.

That the educational value of such a campaign, if successfully carried out, would be very considerable was obvious at the outset. Ignorance and its constant attendant, superstition, still exist to a considerable extent in spite of the determined efforts which have been made to ensure some degree of education for everyone. With this larger issue went the creation of a more general interest in astronomy and the advantages to be gained therefrom, which astronomers recognized as a legitimate outcome; they would have been more than human if they had not done so.

The Campaign

A publicity campaign is usually started by raising money for expenses. The Astronomical Society never had any funds for such a purpose, nor was it even suggested that an attempt be made to secure them. The annual income of the society raised from the dues of its members is less than $1,000 a year and most of this goes into office expenses. But it had other assets of a less tangible but more effective nature. First, and by far the greatest of these, is the general interest of the public in astronomy, and it was on this that the work of the committee was mainly based. A thorough belief in this, which was obviously shared by the press, secured general publicity from the start. Then there were the members of the society who were willing to talk, write, and lecture on the eclipse whenever the opportunity came to them. To this was added the enthusiastic and immediate co-operation of a body of amateur astronomers, The American Association of Variable Star Observers, who, in the leisure that they may secure from their regular occupations, are rendering valuable services to the subject by making observations on the continual changes of brightness which many stars exhibit.

Men whose lives are spent in investigation into the secrets of nature have neither the time nor the inclination to study methods for communicating their knowledge to the public. Usually the information which is given in the press has to be dragged out of them and then written up by those who have little knowledge of the subject and who, with the best will in the world to secure accuracy, must often make mistakes and give false impressions of the importance of the material they furnish. Further,

the latter are at the mercy of cranks, some of whom even hold positions which would seem to entitle them to a respectful hearing but whose ignorance of the matters they give out prevents them from getting a place in the technical scientific journals. The committee was no exception to the average scientific body. It started out with no experience and no knowledge of the proper methods to secure publicity. It soon appeared that little was needed. All that the press demanded was material from an authoritative source expressed in language that the "man in the street" could understand, and such material the committee endeavored to furnish at intervals.

As soon as the earliest notices appeared, many of the difficulties of the campaign were solved by an offer from Dr. E. E. Free who came down to New Haven and, on behalf of the "Scientific American Journal," placed the services of himself, his staff, and the facilities of his publication at the disposal of the committee. He had already started to interest his readers in an investigation of radio transmission at the time of the eclipse and offered to add to this the assistance of the Journal in securing the astronomical observations from the public which the committee had in view. Besides the additional publicity which could be secured amongst the readers of this journal, who numbered those whom it was chiefly desired to reach in the first instance, very practical help was afforded by the distribution of the press material and the free circulation of a general article describing the phenomena and of coupons to be filled out by observers. The committee could only reach the more important newspapers through a few large news distributing agencies; the "Scientific American" listed the small local dailies and weeklies and distributed the articles so effectively that few of even the

smallest country towns failed to have the opportunity to learn the facts. It also acted as a receiving station for all the answers sent in and undertook the plotting of the results on maps so that the material could be utilized for investigation.

Co-operation

With these numerous aids public interest was fully aroused at least a month before the eclipse. It then became possible to see what help could be obtained from the various public services. These organizations now-a-days have a quite different relation to the public from that which was common before the opening of the present century. Then they issued their decisions and, although the public and the press might pour forth thunderbolts, they usually had their own way. Now they frankly admit that any action taken must have at least a considerable degree of public opinion in its favor. It was an excellent sign of the general attitude towards the eclipse that no suggestion of action made to any one of these services was thrown down. All that seemed to be needed was for them to be shown the way in which they could assist.

Mention has already been made of the Nautical Almanac Office of the Naval Observatory. Its natural interest in the eclipse, the predictions of which it furnished, in detail where requested, soon took a wider sweep. Through the co-operation of Captain Pollock, the Superintendent of the Observatory, the use of the Dirigible Los Angeles, to carry a party of astronomers from the Observatory a mile or so into the air in order to make observations, was secured. In the event of cloudy weather over the whole of the land track of the shadow, it might still be possible to secure records of the eclipse from the platform of the airship. And in any case it would be valuable

Photograph of the Corona at the Eclipse of January 24, 1925, Taken at Yale University Observatory

The Solar Prominences at the Eclipse of January 24, 1925, Photo by Professor F. Slocum, Wesleyan University Observatory

Instruments for Observing the Eclipse of January 24, 1925, on the Grounds of the Yale University Observatory, used by Professor J. A. Miller of Swarthmore College, and Dr. H. D. Curtis, Allegheny Observatory

as an experiment for future guidance, to find out what observations could be effectively secured in this way, since no such previous attempt had been made. The Army also contributed by sending up an airplane. Observation here was obviously more difficult on account of the rapid oscillations which are inseparable from its motion. On the other hand, the airplane can rise without difficulty three or four miles into the air and thus give a better chance of getting above the clouds.

The timing of an eclipse is a matter of great importance to those who are interested in the motion of the moon. Its occurrence is predicted to a second and now-a-days it is not expected that there will be more than a very few seconds between the prediction and the observation. For the latter every observer must have the correct time. Since the advent of wireless, few observatories feel that it is necessary to get the time directly from the stars and sun. The Naval Observatory is especially equipped for this work and it is an essential part of its daily routine. The big wireless stations at Arlington and Annapolis daily transmit this direct from the Observatory to every one who wishes to tune in, and their error is rarely more than one or two-tenths of a second of time. For the eclipse these stations agreed to send out the correct time by wireless signals half an hour before and half an hour after totality. This would enable observers to correct their watches and clocks both before and after, allowing them also to judge whether their timepieces had run properly during the hour.

For the all important question of the weather at the time of the eclipse the bureau at Washington agreed to issue a special forecast on the previous afternoon to be sent out by telegram and radio. It is not yet possible to

predict the condition of the atmosphere with any certainty much more than thirty-six hours ahead in spite of the claims often made by various amateur weather prophets. The human mind has a curious faculty for remembering successes and forgetting failures and it is also apt to interpret any resemblance as a success, if belief tends in that direction. It is fairly safe to predict a certain number of storms during the winter and if the prediction covers a range of two or three days, as is often the case, almost any weather that we are apt to have in winter can be fitted in by the willing believer. The astronomer knows this so well that the only matter on which he will ask for information in the months before any eclipse when he must begin to make his preparations is the average weather for the date and place in past years. This is easily obtained from the records of the Weather Bureau. At the time of the eclipse, these averages showed that the chances for clear weather at New Haven were about even and that they diminished towards the western part of the track.

The special forecast issued on the afternoon before the eclipse was made from observations taken not later than eight o'clock that morning. It predicted almost exactly what actually happened, namely, clear skies on the eastern part of the track of the shadow with clouds over most of the western part. While of course any prediction could not affect the preparations of the astronomer who must be fully ready to do his work once he has decided to observe, it was of very considerable importance to the tens of thousands who were intending to travel into the shadow track and to the millions who expected to postpone their daily activities in order to see the spectacle. The electric power companies also had to be prepared. If

the skies were cloudy, the factories would continue running, and a heavy additional load would be placed on their services by the need for artificial light for a short time. Numerous arrangements which had been made for special trains would have to be cancelled. On the other hand, if the weather were clear, it had become sufficiently evident at that time that the consumption of current for both light and power would drop to a minimum in most places.

Another department of the federal government, the Hydrographic Office, issued a special map of the Atlantic showing the eclipse track and giving a brief but sufficient account of the observations which could be made at sea. This was distributed in advance to all vessels which might be in or near the track at the time of the eclipse and thus furnished another possibility to secure a record.

The transportation companies co-operated in a manner which gave great satisfaction to the public. The New York, New Haven and Hartford Railroad, some two weeks before the eclipse, after consultation with the committee, advertised special trains from Boston and other points which were outside the zone of totality, to places within the zone, and placed in all its stations an attractive map showing the shadow track with the times of totality. Every ticket sold in advance carried the privilege of redemption in full should the weather be such as to make the running of such trains useless. By the morning of the eclipse, the public sale was large enough to require six special trains from Boston to Westerly, Rhode Island, and two to Willimantic, Connecticut; two from Worcester to New London, and two from Pittsfield to New Milford. These trains carried 8,231 passengers, starting about six A. M., and stopping in the zone of totality about an hour

before returning to their points of departure. Besides these, five special trains were chartered by Amherst, Wellesley, and Smith Colleges and took 3,343 students and instructors to Wallingford, New London, and Windsor. Further, many thousands of people came into Connecticut by the ordinary trains the day before the eclipse. None of the services failed to arrive in good time for the event. Owing to the activity of Professor Boss, the director of the Dudley Observatory at Albany, New York, enough tickets to fill three special trains from that city and Schenectady were sold in advance, and over 2,000 people were carried in this manner to points within the zone of totality.

All through the work of giving publicity to the eclipse, emphasis had been placed on the conditions necessary to see the spectacle at its best. These were summed up in the phrase "No lights, no traffic, and no noise." Everyone knows how the glare from automobile headlights or street lights or even from brilliantly lighted windows destroys the beauty of an upward gaze on a moonlight night, so that the delicate coloring of earth and sky and the fainter streamers of the corona would be altogether lost under such conditions. During a total eclipse the general darkness is usually that of a moonlight night, and it is then scarcely safe to operate traffic on the roads without artificial light. Both on account of the safety of the public and the opportunity to observe the eclipse, it was asked that as far as possible all traffic should cease during totality. The initial impulse to secure general observance of these suggestions was obtained when the Connecticut Company, which controls nearly all the trolley car systems throughout the State, issued instructions to its drivers to stop their cars as soon as it became unsafe to operate without headlights.

As far as can be learned no town or city in Connecticut turned on its street lights. Automobilists stopped their cars and lights were extinguished everywhere where their presence could cause trouble. Much the same conditions seem to have existed throughout the whole portion of the zone of totality which had a view of the sun. Only in New York City, the upper part of which was in the track of the full shadow, was there exception. Apparently a certain degree of nervousness on the part of the authorities responsible for the safety of the people caused them to give orders that the streets should be lighted, an exception being made by request of Central Park which was accordingly guarded by a special force of some three hundred police! This was illustrated in an interesting manner by the records of the "eclipse loads." The affiliated electric companies reported increased loads from those companies which chiefly supplied light in New York City and diminished loads during the whole morning where the output was chiefly for power. The Hartford Electric Light Company, which supplies both light and power, reported a load during the eclipse the same as that which ordinarily occurred at 2 A. M.

Most of those who controlled factories, banks, and offices contributed individually and through their associations to carrying out the request of the Committee that everyone should have a chance to view the eclipse. Practically every industry in the State closed down either for the day or for a sufficient time to enable their workers to get to positions where the sun could be seen. Office buildings were emptied and stores and banks closed their doors. It being a Saturday, few schools were in session, but the colleges and universities naturally suspended their activities for an hour or so.

A feature greatly appreciated was the issuance by Governor Trumbull — one of his first official acts after entering office — of the following Proclamation, the first, but we hope not the last, instance of an official call to the people to interest themselves in astronomy:

STATE OF CONNECTICUT

By His Excellency
JOHN H. TRUMBULL
Governor

A PROCLAMATION

On Saturday, the twenty-fourth of January, the people of Connecticut are to have an opportunity to witness a scientific event of the first importance —

A TOTAL ECLIPSE OF THE SUN

This phenomenon has been visible in New England only twice since the landing of the Pilgrim Fathers, and only fourteen times in the last two thousand years. On the present occurrence Connecticut has a particularly favorable position in the path of totality and astronomers and others are coming to our State from all parts of the world, to view a natural happening which affords so infrequent occasions for scientific study.

I earnestly urge all school authorities and teachers, at some time prior to the coming of the Eclipse, to devote a reasonable time for instruction and explanation of this unusual astronomical event; and to all others for whom it may be convenient I recommend that advantage be taken of this exceptional opportunity to witness a spectacle which is now engaging the attention of scholars and learned institutions of the world. It is a manifestation of the enlightened age in which we live that solar eclipses are no longer regarded, as by the ancients and savages, as auguries of war and disaster, but as opportunities for scientific research, fraught with the possibilities of new fields of knowledge for this generation.

Given under my hand and seal of the State at the Capitol, in Hartford, this fifteenth day of January, in the year of our Lord, one thousand nine hundred and twenty-five and of

the independence of the United States the one hundred and forty-ninth.

(Signed) JOHN H. TRUMBULL.

Seal

By His Excellency's Command:

FRANCIS A. PALLOTTI,

Secretary.

Thus almost every agency, governmental, commercial, and educational, co-operated in one way or another for the benefit of the people. Other more technical assistance also came from various sources. The remarkable service furnished by the American Telephone and Telegraph Company in linking up several of the observatories for the exchange of signals during the eclipse is described below. The wireless companies co-operated in an extensive investigation of the effect of the eclipse on reception, while other organizations with scientific staffs undertook special problems.

The Astronomical work asked of the public was mainly the determination of the northern and southern boundaries of the shadow. When the skies are clear it is possible for even an untrained person to say whether the eclipse was total or not at the particular place where he stood. This can be done by various tests. In order to obtain the information the following set of questions to be answered was widely circulated through the newspapers and every available agency:

QUESTION 1. *If the sun is not quite eclipsed at your station there will always be a bright edge of the sun visible, or perhaps only a single point. One bright point may appear on one edge of the sun before the other has entirely disappeared. At your station was there any time at which no bright edge of the sun was visible? Answer YES or NO*.....

QUESTION 2. *If the bright edge of the sun entirely disappeared, how many seconds elapsed before another bright part of the sun became visible? Answer.....seconds.*

QUESTION 3. *Was the time set down in the last question merely guessed at or was it actually measured? If measured, how was the measurement made?*.....

.....

QUESTION 4. *The fringe of light surrounding the sun and called the corona is fully visible only if the face of the sun is entirely covered. At your station was there any time at which you could see the corona* all *around the sun? Answer YES or NO*.....

QUESTION 5. *Could you see any stars or planets at the time the sun was most completely covered and how many did you see?*

.....

(If convenient, draw a little map showing the position in the sky of the eclipsed sun and of the stars and planets that you saw.)

QUESTION 6. *If you are on a high building or a hill near the edge of the shadow path you may be able to see the shadow advancing across the country. If so, what buildings or other landmarks were inside and what were outside the edge of the shadow?* .....

Landmarks inside of the shadow:.....

.....

Landmarks outside the shadow:.....

.....

QUESTION 7. *It is necessary to locate your position very accurately, so that the engineers who compute the reports will know just where to place your observations on the map. Accordingly, give your position by means of the nearest street intersection (if in a city or town) or by means of some easily located building such as a railroad station, a town hall, or some landmark which can be placed easily on a map by a person familiar with the district*.....

.....

If you have a map of your district, published in a newspaper or from any other source, mark a cross on the map at the position where you stood and send in the map with your report.

An interesting feature which grew out of this was the organization of lines of boy scouts, students, and others across the predicted edge of the shadow. This was taken in hand by individuals who were interested in the general programme with the idea of getting a determination of the actual position of the edge from the accumulated evidence of those forming the line. An extensive plan of this kind was organized and carried out by the affiliated electric companies of New York City, mentioned above. One hundred and forty-nine observers were placed near Riverside Drive between 72nd and 135th Streets, half of them to watch whether the eclipse was total or not, and the other half to watch for the position of the southern edge of the shadow. The same organization also co-operated with the management of the Electrical Testing Laboratories and other agencies, for the determination of the intensity of the general sky-light during totality.

The chief receiving agencies for the answers were the offices of the National Research Council in Washington and of the "Scientific American Journal." Many of the newspapers, however, gathered the material in their own districts. All of it was finally assembled in the latter office for tabulation and for final discussion by astronomers especially interested.

Other requests to the public included the photography of the corona and observations of the intensity of the light during totality by means of the ability to read types of various sizes and to detect known features of the landscape. Somewhat more technical instructions were needed to obtain details concerning the shadow bands.

The results give some information concerning the methods which are useful in a campaign of this character. Where definite questions are asked in a manner which can

be easily understood and are circulated in such a way that they reach those for whom they are intended, as in the case of the questionnaires for the determination of the edge of the shadow and for the investigation of radio strength, large numbers of answers come in and a considerable proportion of them can be utilized in discussions of the results. Where equipment, like a camera or a radio set, is widely distributed, it will be extensively used, even without special advertising effort, and the results will be improved by press articles giving general instructions. Where neither of these aids is present, the material is scanty and of doubtful value.

January 24, 1925

The bitter cold of the day preceding the eclipse seemed to have no effect on the general enthusiasm. At night the stars were shining brilliantly with the thermometer near zero everywhere. As the first faint streaks of dawn began to show in the sky, clouds gathered in the east and west so that by seven o'clock it looked as if the sun might be hidden after all. An hour later, when the first little nick appeared in the edge of the sun low down on the horizon, it was evident that the thin blanket was slowly dissolving. Would it go in time to leave a clear view of the sun? By nine o'clock, when a narrow crescent only of the sun was still visible at New Haven, it was evident that this city at any rate was to enjoy the spectacle. A thin wisp of cloud still lingered as a threat near the sun, but anxious watchers saw that it was moving away or dispersing and all knew that nothing was to mar the spectacle.

From early morning thousands had been making their way by automobile, trolley, and on foot over snow covered roads to reach hills from which the onrush of the shadow

might be seen. Others, perhaps wiser if less adventurous, made their way to hospitable residences from which good views could be obtained and where shelter and hot coffee were available. Many stayed at home or journeyed to their usual employments, secure in the knowledge that a warning signal would be given in time for them to reach a chosen roof or open space. Many hundreds were gathered on the open roads and ground near the observatory whence a view could be obtained and from which access to see the instruments would be easy after the event. In New Haven, and the writer learns that conditions in other parts of the State were similar, the factory whistles blew at six minutes past nine. Banks closed their doors, factories and offices stopped work, the streets became quiet, lights disappeared, and all who had not already reached their vantage points went quickly to roof or open space. Most of the people had provided themselves with smoked glass or a card with a darkened photographic film so that the approach of totality might be viewed without danger to the eyes. These had been sold or given away by the tens of thousands and even so the supply failed to meet the demand.

A minute or so later the shadow-bands began to dance in streaks or wavy lines across the snow-covered ground. By this time the sun was merely a thin crescent, and the little cloud near it added its part to the spectacle by showing bands of rainbow colors.

Suddenly at fifty-three seconds after eleven minutes past nine the crescent broke in pieces and one second later disappeared. The event occurred five or six seconds after the prediction, though no one but the astronomers knew that, nor if they had known would it have mattered. Those on the hills watching for the onrush of the shadow

from the west failed to get a sight of it, but that was soon forgotten in the sight of the glory of the corona which burst into view. From behind the black disc of the moon, streams of pearly white light shot out in all directions. The eye, now needing no protection could trace them one or more breadths of the disc away until they were lost in the dark blue sky. Not far away, Jupiter, Venus, and Mercury shone brilliantly, and the brighter stars were visible. The horizon in every direction showed the yellows and pinks of dawn, while high in the sky to the southwest appeared the faint edge of the band of shadow fifty miles or more away.

Close to the edge of the sun could be detected the flame-like wisps of red light known as the prominences. These were difficult to detect with the naked eye but could be easily seen through a pair of binoculars. One of them shows on the photographs as a faint arch some fifty thousand miles high. Another gave the appearance of a clearly defined peg on the disc as if the gas had suddenly rushed out and had not had time to disperse.

A brief two minutes and a bright spot of light appeared, immediately followed by others which almost in an instant joined up and formed a crescent. The corona faded out, the snow-covered ground quickly grew bright, and the great climax had passed. For a few minutes longer the crowds gazed at the growing crescent and then coming back to earth remembered the chill of the air and sought warmth and shelter. Soon the hum of machinery was again heard, the banks and stores opened their doors and the daily round flowed on. But business and manufacture languished. It was in any case only a half-day and many experiences had to be interchanged. A whole state and surrounding people in the heart of the nation's

business cannot stop work for half an hour to see the event of the century and resume as if nothing had happened. For once, science had come into its own and concentrated attention on itself to the exclusion of everything else. Ten million people had stopped to gaze into the sky and saw together the glory of the heavens.

The attempt to set forth the many human incidents which occurred would almost fill a chapter, even those which have reached the writer. How the prevalent disbelief amongst the less educated portions of the masses that anyone could foretell the future with such accuracy was changed to wonder, was illustrated many times over. If at the present moment it were reported that any astronomer known to the public had predicted a calamity such as an earthquake there would probably be universal panic. The keen sense of responsibility of the press has fortunately avoided any such occurrence. Some two weeks after the eclipse a small and ignorant group of religious enthusiasts predicted the end of the world. The press featured it in a semi-humorous fashion, but it was after all a striking object lesson, illustrating to many the difference between the scientific man, sure of his ground based on the solid rock of past experience, and the human mind with no furniture but its own ideas to guide it. After all, fear is chiefly the child of ignorance. Science claims no control over the forces of nature. It can only claim knowledge, and by that light show humanity how to act.

Astronomers at Work

When the track and time of the eclipse were first announced, few of the observatories felt inclined to make many preparations for taking extensive observations. Undertaking an eclipse programme is usually an expen-

sive procedure, requiring weeks or months of preparation during which the regular work of the observatory is seriously handicapped. The eclipse did not seem very promising for securing new information since the sun at best was rather low down in the sky and the chances for fine weather did not exceed fifty per cent. Gradually, however, the feeling grew that as the eclipse track presented so many unusual facilities for observation the opportunity should not be lost. The observatories of Yale, Wesleyan, Vassar and Cornell would be well within the complete shadow and were equipped to make extensive observations or to furnish facilities to visitors from other observatories. Smaller stations like that of the Maria Mitchell Observatory on Nantucket and many private instruments were also well situated for observation. In the end a number of parties came into the zone from other parts of the country, the majority of them accepting the hospitality of the observatories at New Haven or Middletown as furnishing the best chances for success.

The Yale University Observatory in New Haven had the extraordinary good fortune to be situated within half a mile of the predicted central line of totality, and thus to secure the longest duration of totality possible for its longitude, namely two minutes and one second. It had a record for clear skies on the day and hour of the eclipse based on averages for that period in previous years better than any other place within the whole track, namely, about fifty per cent. Its grounds cover some seven acres on a ridge a hundred feet or so above, and less than a mile and a half from the center of the city and are easily approached from any direction. There are no buildings in its immediate vicinity high enough to interfere with its view in any direction. It is true that the great Winchester

Arms factory is less than half a mile away, but its chimneys and towers stand on much lower ground and lie directly to the west of the Observatory while the sun at the time of the eclipse was in the southeast. Even had there been danger of trouble from smoke flowing across and interfering with the work of the observers, it would at least have been absent that morning because the management decided to shut down for the week on the previous Friday evening so as to give its employees a chance to see the eclipse. Incidentally it may be mentioned that the notice posted on its bulletin board announcing the shut-down also gave an excellent summary of the principal events of the spectacle, a procedure which was not only in line with the efforts which were being made to secure the best educational results from the phenomenon, but is indicative of the modern spirit of factory owners towards the intellectual welfare of their workers.

Astronomy, the "Geography of the Heavens" as one old text-book naively calls it, was one of the regular subjects in the curriculum of a century ago. It was treated mainly as a descriptive science and much of it must have been rather uninspiring since it had little more to give than illustrations of geometry and mathematics. The calculation of an eclipse is within the memory of many still living as a portion of their college work in astronomy. Even for the expert astronomer the subject was mainly confined to the motions of the bodies in our solar system and the description of what could be seen through the telescope. Speculations and theories concerning the development of our solar and stellar systems were widespread but they had little basis until the application of spectrum analysis began to give information as to the nature of the materials composing the sun and the stars.

Then photography, which permitted the leisurely study of phenomena instead of the fleeting glances obtained through the telescope, extended the range of knowledge and made possible the testing of theories and the construction of an edifice which embraces the fundamental sciences of physics and chemistry and demands for its continuance all the resources which the mathematician can furnish.

One of the earliest opportunities for astronomical investigation in America was furnished by the State of Connecticut in 1828 when Shelton Clark presented to Yale College a sum of $1,200 to purchase a telescope with a five-inch object glass and ten feet focal length. The observations made with this instrument by Olmstead and Loomis on Halley's Comet, which appeared in 1835, created great public interest and stimulated the study of astronomy to such an extent that many observatories were founded in the years immediately following. A similar instrument was presented by Mr. Hillhouse, and when the Sheffield Scientific School was founded as an adjunct to Yale College, Mr. Sheffield also gave a telescope, which was mounted on the top of one of the buildings of the school. The present observatory was founded about 1880 by Mr. Winchester who gave for its use a tract of land and with others subscribed money for the erection of buildings and the purchase of instruments. It was at first designed to be mainly a horological institute for the furnishing of time to the State, which about this time passed a law requiring a uniform system of time for the railroads and designated the Observatory as the place which should furnish it. This time service was continued until 1917. The institution, partly from the subvention given by this purpose, and partly by the income received through test-

ing watches, clocks, and thermometers, was designed to be self-supporting. Astronomical research was not, however, forgotten as the early purchase of a heliometer showed. For a short time H. A. Newton, whose astronomical work had brought him wide recognition, acted as director. In 1884, the services of Dr. W. L. Elkin were secured and shortly after he became director. He instituted amongst other observing work the first extensive campaign for measuring the distances of the stars, known as their parallaxes, the results of which have become a feature in the history of astronomy. A new career for the Observatory was opened in 1919 when the present director, Dr. F. Schlesinger, was appointed. The investigation of the parallaxes of the stars is still an integral part of the work of the Observatory. To it have been added other lines which include the variation of latitude, a new catalogue of stellar positions, the measurement of the brightness of the stars, and theoretical investigations in gravitational astronomy. At the time of writing the parallax work is about to be extended to the southern skies by the establishment of a station at Johannesburg, in South Africa.

Until some ten years ago the observatory at Wesleyan University had been used solely for purposes of instruction in astronomy. Its earliest instrument, set up in 1836, was a telescope having an aperture of six inches and a focal length of seven feet. An instrument of double this size was acquired in 1868. In 1916, a new observatory was erected in memory of J. M. Van Vleck, who for many years had been Professor of Mathematics and Astronomy, from funds left by his brother for the purpose. It stands on high ground above the town and near the University, and contains a twenty-inch visual objective with a focal

length of twenty-eight feet. The reception of the object glass was delayed by the war and it has only very lately been put into working order. Under the present director, Professor F. Slocum, it is planned to use this new instrument in the immediate future to determine the distances of the stars. It is interesting to note that the two chief observatories of the State owe much to their professors of astronomy, for an integral part of the endowment of the Yale Observatory comes from the estate of Professor Loomis.

Although not situated in this State, other observatories in the shadow track should be mentioned. Those of Vassar College at Poughkeepsie under Professor Furness and of Cornell University at Ithaca under Professor Boothroyd were also not far from the central line of totality. The observatory on Nantucket Island named after Maria Mitchell, one of the earliest women astronomers and well known to a past generation, is now under the direction of Miss Margaret Harwood, who works in close co-operation with the Harvard College Observatory. It was situated further from the central line but had a slight advantage in its more easterly position with a higher sun at the time of totality, though this was partly offset by its more northerly position. Then there are numerous private observations belonging to individuals and companies most of which were utilized in one way or another for observation of the eclipse. Taken altogether the opportunities ready to hand for astronomers were far greater than at any previous event of this nature.

Invading but friendly hosts of observers came from all parts of the country. There is plenty of rivalry amongst the astronomers of the country but it rather takes the form of trying who can produce the best results and help

others to do the same, than the less healthy ideas which prevail in some other human activities. The front line position, which this country can claim with some justice in this subject, is perhaps as much due to this attitude as to the contributions in money which have been available. So when requests for space on observatory grounds and in the buildings came from other institutions, they were not only welcomed but every possible facility was accorded.

Observing an Eclipse

The ordinary telescope in an observatory is so mounted that it can be directed to any part of the sky, and when it has been pointed at any object, it must stay pointed. The daily motion of the earth round its axis causes every object in the sky to appear to move when looked at through a fixed telescope, but all important instruments are driven by a "clock" which is so timed that the object will always remain at the same spot in the field of view. By this device, whether an object is to be observed with the eye or by means of the photographic plate, its rays can be made to stay within the tube of the telescope.

When the magnification of the object is slight and the time of exposure short, it is not necessary to keep the telescope in motion. But, for some of the work, as much magnification as possible is desired and the greater this is to be, the longer must be the tube of the instrument. The time of exposure required increases with the magnification but can be diminished by using big lenses or mirrors which will gather in more light.

At an eclipse a large image and the shortest possible time of exposure are desired by the astronomer. With the large image the motion becomes visible. On the other hand, the whole amount of motion during the few minutes

of an eclipse is small. Instead of building a long movable telescope — an expensive procedure — the eclipse observer erects a fixed temporary tube, generally of wood, pointed in the direction the sun will have at the time. The lens or "object glass" is mounted in a fixed position at its upper end, and, to take care of the motion, the slide carrying the photographic plate at the other end is moved by the "clock" so that the image of the sun on it will stay in the same spot. Of course if, for any purpose, only a short tube is required, this is often mounted so as to be moved by a clock, but as the motion required is very small the mechanical arrangement can be much simplified. Both devices are used at an eclipse.

As far as the observatories situated in the zone of totality were concerned, their telescopes with the driving apparatus could be used without any new construction. But since many different kinds of observations requiring different instruments are made during an eclipse, these different instruments could be mounted on the regular telescope tubes. The big instrument at Middletown with its object glass of 20 inches in diameter had half a dozen extra pieces of apparatus attached to its tube, all of which were in action during the eclipse. The old heliometer at New Haven, now a relic of the past, carried a moving picture camera which ground out its film all through the eclipse.

The grounds of the Yale University Observatory presented a regular battery to the sun. Professor J. A. Miller, of Swarthmore, who has a large equipment for eclipse work which he has taken to several of these events in different parts of the world, brought it to New Haven and erected it in the open. With him was associated Dr. H. D. Curtis, of the Allegheny Observatory. The most pic-

turesque feature was a wooden tube over sixty feet long. Its upper end was supported on a trestle and carried a twelve-inch lens, while its lower end, with the photographic plate holders and the clock, was situated in a wooden hut. Besides this, three polar axes, each supporting a movable tube with its own clock, were erected and carried different instruments, including two movie cameras operated by a news company. Other pieces of apparatus of a less pretentious character were in evidence, including a telescope erected by the Reverend D. B. Marsh who brought it from Bermuda.

The Yale Observatory of course had its ordinary equipment at work. The Loomis telescope with its fifty-foot tube was taking pictures, not only during totality, but also before and after for the partial phases, so as to secure plates which might furnish additional material for determining the position of the moon. The new Catalogue Camera and a doublet attached to the Reed telescope were used to obtain photographs of the corona. On the grounds, one of the meteor lenses was mounted with some twenty-five feet of film, an exposure being made every second by means of a pendulum, from a short time before totality until the sun's edge became again visible.

In order to work all these instruments as rapidly as possible, many assistants were drafted in to help and were trained by means of many rehearsals in their duties. Labor is cheap on these occasions. As much division of the work as is possible in the space round each instrument is made, so that the duties of any one individual are few and clear cut. Most of the exposure times are short, the chief delay being in the changing of the plates. Altogether some fifty persons were on the grounds occupied in

various ways, no others being admitted until the eclipse was over.

A considerable amount of work was done in the Sloan Physics Laboratory of the University in connection with the electrical conditions of the atmosphere. Observations of its ionisation and effects on the earth's magnetism were made. In connection with wireless, a complete record was kept of the radio strength during the whole of the eclipse. In order that this should be exactly correlated with the time, the American Telephone and Telegraph Company connected, without charge, the Laboratory with the Observatory by a special wire which automatically carried the second beats from the clock to the observers.

At Middletown numerous observations of many kinds were made. The big telescope with its lens of twenty inches diameter took four photographs during totality and others during the partial phases, and its four-inch finder took additional pictures. The University of Virginia had two spectrographs mounted for obtaining the spectrum of the corona as well as an instrument in another part of the building for photographing the flash. The observatories of the Universities of Wisconsin and Illinois had devices at one of the windows of the building to measure the intensity of the light of the corona. On the roof, Brown University was busy obtaining pictures of the corona.

In an adjoining garage, the Harvard Students Observatory and the Bureau of Standards had special instruments for measuring the intensity of the coronal radiations and tried to photograph the shadow bands. In the physics building of the University was a party from the Mount Wilson Solar Observatory in California which brought a reflector of twenty inches in diameter and other

material designed to obtain the flash spectrum, the coronal radiations and direct photographs of the streamers.

On other roofs were observers connected with other departments of Wesleyan University as well as parties from Williams College and the Weather Bureau. These were taking observations connected with our atmosphere, a moving picture machine being used to photograph the shadow bands.

Professor Miller had been on the grounds of the Yale Observatory at intervals during the previous weeks attending to the erection of his instruments and making the observations necessary for their careful adjustment. The week of the eclipse, a period with bitter cold weather and for one day experiencing a heavy snowstorm, was a time of intense activity on the part of everyone. In a New England winter much must be done at the end, for storms are not infrequent. As to the prospects of the weather, it is all or nothing; no half-measures are of much value. The day before, one of the coldest of the winter when the thermometer stood most of the time near zero with a wind blowing strongly, constant rehearsals took place, to the delight of the press correspondents and camera men who were then able to get the material which they would be denied the following morning, for none were to be present during the eclipse. What time was not used in this way was fully occupied in talking — for publication and otherwise—because this eclipse had ceased to be the private property of the astronomers. The general instructions were to tell all you know and, after doing so, to sacrifice your friends and colleagues without compunction to the demands of the press. The gate to heaven, so far as it was under the control of science, was thrown open.

The last and perhaps the most interesting rehearsal

took place between seven and eight in the evening, when for the first time, the observatories at New Haven, Middletown, Poughkeepsie, and Ithaca and observers at stations in Buffalo, New York, and Easthampton, Long Island, were connected up by telephone and telegraph. The arrangements were such that intercommunication by telegraph was complete for every station, but only the Buffalo, Poughkeepsie, Ithaca, and New Haven stations could talk, the remaining stations, however, learning all that was said. As stated above, this service was furnished without charge by the American Telephone and Telegraph Company. The organization was remarkably complete. Three wires had been run from the nearest trunk lines into the observatories and stations for telephone, telegraph, and reserve, respectively. At each place, telephone and telegraph operators, a circuit expert, and the local construction chief were on hand, to get the whole system in working order and then to use it as instructed by the local astronomer. Full directions, contained in a typed pamphlet of some eight long pages, had been issued after consultation between the leading officials of the company, Dr. E. E. Free, and the writer.

The Harvard College Observatory had planned observations at several stations, one of them, at Buffalo, being occupied by Dr. Harlow Shapley, the director. The company furnished him with an excellent post on the top of the Exchange Building, the signaling instruments and operators being with him there. At Easthampton, Dr. Free had gathered a corps of radio experts, moving picture operators, and other observers. The New York station was in the Laboratory of the Western Electric Company and signals were recorded on its extremely delicate mechanisms. Professor Boothroyd, of the Cornell Ob-

servatory and Professor Furness of the Vassar Observatory took charge at Ithaca and Poughkeepsie, while Mr. H. Clyde Snook, head of the Western Electric Research Laboratory, took charge at New Haven at the request of the acting director, who had been made the responsible chief for all stations. At the conclusion of the rehearsals all connections with the trunk lines were left undisturbed until after the eclipse.

On Saturday, the whole system was in working order and complete intercommunication established by 8:30. From 8:40 to 8:45 it was silent while the Arlington and Annapolis time signals were being sent by telegraph and radio. The period from then till nine o'clock was utilized in sending and receiving messages concerning weather and other conditions at the various stations, the wires being kept fully in use so that any failures should be instantly detected. At 9:05, ticks at intervals of a second were sent by telegraph and telephone until a few seconds before totality. A short silence and the first message of the totality was received from Dr. Shapley. Actually what he said indicated cloudy weather with no information, but it was accidentally interpreted as the expected signal. By good fortune this came at the exact second when totality must have occurred there and indicated that the eclipse was five seconds late. Immediately after, the Ithaca operator began sending ticks until near totality when, after a brief silence, the signal for second contact indicated that the eclipse was five seconds late. Poughkeepsie followed, making the interval between prediction and observation three seconds. The final signal came from New Haven where the estimate was five seconds. The remaining stations recorded their estimates but they

were not sent over the wires since they were not needed once the eclipse had started at the more westerly points.

Friday night was clear and cold. The lonely watcher in the observatory, rising from his cot from time to time, saw a snow-covered ground lit only by the stars and a few nearby lights, with no hint of anything but a glorious day for the morrow. At 5 A. M. he might have been seen working in the open at a last adjustment of his instrument with a tiny flashlight which threatened extinction at any moment. A hint of dawn appeared in the east and with it some wisps of cloud. The rising sun disclosed gathering cirrus both to the east and west, and confidence changed to anxiety. Soon the observers began to gather, discussion of the weather on every lip. Those arriving on foot and in cars were challenged to show their tickets of admission distributed with many precautions the day before; no relaxation of the rule was permitted.

Shortly after eight the first nick in the edge of the sun was seen through the now diminishing wisps of cloud. Eye protectors came into use and cameras began to click. The motion picture operators set their instruments going to take a picture every second or so. Every observer began to give a last glance to his instrument, however confident he was that everything was right and ready. About 8:30, the boy scouts arrived, useful as always for voluntary service, and formed a protecting line for the observers around the half mile boundary of the grounds, reinforced by some half dozen or more guardians of the peace assigned by the chief of police for this service. Their duty was also to ask that traffic and lights and noise near the Observatory should be avoided during totality, and, with the co-operation of the people, nothing occurred to mar the spectacle or to trouble the observers.

The clouds had vanished as if by magic and none remained but one small thin wisp ten degrees or so from the sun, apparently stationary and serving, partly as a reminder that the air still held control of the situation, and partly as a setting on which the eye might rest. The last rays of the sun shining through the tiny particles of water vapor were broken up into colored beams and the cloud was lighted as if by a rainbow with its spectral order several times repeated.

By nine o'clock all was ready. At precisely six minutes past, the factory whistles gave their warning blast. The curious shadow bands began to show their fleet alternations of light and shade travelling quickly across the snow. A few observers began to measure their direction and speed by placing sticks on the ground or by other devices, and some of the bolder photographers attempted to catch them on their films. A minute later, a megaphone boomed out to the observers, "Buffalo says five seconds late." The counter, with his eye on a chronometer, calls, "Four minutes more." Again the megaphone, "Ithaca says five seconds late." A minute later, "Poughkeepsie says three seconds late." The counter makes a rapid calculation, and averaging at four seconds late, calls out: "One minute . . . Thirty seconds . . . Fifteen . . . Ten . . . Five, Four, Three, Two, One"; and "Go," from the observer watching for the "flash" spectrum seen one second or less before totality.

On the grounds of the Observatory nothing was heard but the hard voice of the counter, tolling out the seconds from beginning to end, the click of the cameras, and a hurried whisper here and there. Only an occasional rapid glance at the sky could be permitted if every second was to be used. Finally, at the one hundred and twenty-first

count, a shaft of light burst forth and the event was over. A sigh of relief comes from every mouth as the labor of months has been crowned with success. Plate holders and films are carefully wrapped and conveyed out of the way of harm, and in a few minutes everyone is at ease. Three blows of the whistle and the protecting lines are broken. The scouts continue their duties by forming details to guard the instruments from the too curious, an unnecessary precaution as it turned out, for the visitors were far too much impressed with the magic of the craft to venture any such attempt. Amongst the first were a body of twenty or more reporters who gathered at once in an unheated room, the only one available for the purpose, and with shivering fingers attempted to write the information at once given out so far as it was known on the ground and by telegraph over the special circuit. One motion picture news operator rushed his film by special automobile to catch the 9:45 train and his picture was exhibited that night in New York City and the next afternoon in Chicago.

But little more was done in the way of observation. At the top of the Loomis tower, photographs were continued to secure records of the partial phases, and some further pictures of the same nature were taken from the ground. Dismantling of the special eclipse apparatus started at once, and portions of it were packed and ready for shipment the same evening. Some of the observers started to develope their plates immediately, but the majority waited until the following day or until their return home when the excitement attending the event should have passed. The utmost care was necessary to avoid injuring records secured at such an expenditure of labor and expense.

The following week was largely occupied in getting the

observatory back to its normal working condition. An avalanche of correspondence flowed in and had to be dealt with. Prints and lantern slides were needed when the photographic plates of the corona and the prominences had been developed. Continual interruptions from the telephone made the writing out of accounts of the eclipse for astronomical and other journals a difficult procedure. And the telescope for South Africa had to be sent to New York by motor truck with the thought of possible delays caused by icy roads and breakdowns.

Taken as a whole, the eclipse was a success from the point of view of the astronomer. The inevitable failures here and there, through some misunderstanding or forgetfulness, occurred but they were not numerous and in no case did they cause the loss of observation of any essential part of the phenomenon. If one observer failed at one point some other had the record.

Predicting an Eclipse

The accurate prediction of an eclipse always strikes the layman as one of the most wonderful achievements of astronomy and perhaps this is true. It is not, however, the work of any one man or of any one time in our history, but an edifice gradually built up by observation and theory over at least four thousand years. Each step forward produced a closer agreement between the forecast and its fulfillment, until now the path of the shadow on the earth can be laid down within a mile and the time of totality within a few seconds. In the future we should be able to improve on this.

The earliest known predictions are those of the Chaldeans made some four thousand years ago. They must have watched eclipses of the moon and sun for hundreds

of years and kept records on their tablets during that time to have learnt that there is a cycle which very nearly repeats itself every eighteen years. This cycle, which is known as the Saros, indicates that any eclipse known to have occurred will be followed by a similar eclipse eighteen years later. In the case of a solar eclipse, however, the shadow track is considerably shifted on the earth so that in its new position it will not give a total eclipse at the same places as before. Later races learnt more. But the great step forward was the work of Isaac Newton who proved that the simple law of gravitation mainly controlled the movements of the sun, earth, moon, and planets. During the two and a half centuries since he announced it, mathematicians and astronomers have labored hard to follow out the consequences of this law, until by observation and calculation they have succeeded in building up a set of mathematical expressions from which the position of any of these bodies in the sky can be obtained at any time in the past or future.

The people who do the actual calculation do not need now to have much more knowledge of mathematics than is given in the college freshman year. What they have to do is mainly to extract numbers out of big volumes of figures, "tables" as they are called, and to add them together. The rules for finding these numbers from the tables are made so simple that the calculator only needs to follow them in order to get the results needed. The position of the moon is predicted in advance for every hour throughout each year and this work occupies one person for about a year, so that he or she can just keep ahead of the game. For an eclipse, more work is needed, but this again has all been carefully laid out in the same way.

The Nautical Almanac Offices of the various countries take this calculating work in hand and make the predictions, sharing the different parts of the work so as to avoid duplication. The British office gets out the positions of the moon and sun and the Washington office, using these, takes in hand the eclipses. In the years previous to 1923 the predicted times were often 15 or 20 seconds wrong. At the California eclipse of that year, the first with a new set of tables for the moon, there seemed to be no error, and in 1925 the small difference of some four or five seconds is being carefully investigated and its source traced, so that with future eclipses the error may be made even less. The difficulty is not now with the law of gravitation but one of another kind. Some unknown force acts on the moon to make it deviate a little and until we can find out more about this unknown force we cannot predict the deviations. The sun is affected in a similar way, but to a much smaller extent. It was partly for the purpose of finding more about these deviations that the campaign to observe the moon during the months before and after the eclipse was inaugurated, and the results, combined with those obtained at the time of the eclipse, may furnish valuable information.

Scientific Results

It is as yet too early to give very complete information as to the additions to our knowledge of astronomy obtained from observation of the eclipse. Photographs will require some months for measurement and study, while the information to be obtained from the hundreds of answers obtained from the questionnaires has to be carefully plotted on maps and co-ordinated. But certain results have already appeared from a preliminary survey

of the material, and, with the understanding that the conclusions stated here are not final, some account of them may be given.

The positions of the northern and southern edges of the shadow were to be determined in three ways: First, through direct observation by hundreds of observers who were able to say whether the eclipse was total at the particular spots from which they looked at the sun. While there will be many poor judgments of the event, average lines can be drawn which will represent the balance of evidence. At present, the indications are that the southern line was about a mile to the north of that predicted, while the northern line was perhaps only half that amount wrong.

The second method was for observers on high buildings or hills to look for the shadow and watch its limiting position as the edge passed to the south or the north. This particular form of record failed for the same reason that the onrush of the edge of the shadow was nowhere seen with any certainty over the whole band of totality. An explanation was soon forthcoming. Although the sky appeared clear to those on the earth, the airmen looking down on it from above, and particularly Dr. W. J. Luyten, of Harvard Observatory, who was some 16,000 feet aloft in an airplane sent up by the "New York Times," reported that the whole earth seemed to be covered by a haze, and at the time he wondered if we should see the corona. This haze, though not thick enough to prevent a good view of the sun, was sufficient to scatter the light at the edge of the shadow and prevent it from being seen as a sharp line. Another sign of it was a view from New Haven of the southern edge of the shadow where it struck the upper atmosphere thirty or forty miles away. This was visible

to a few careful observers but was so ill defined in the sky that few noticed it.

The third method is a very sensitive one, namely, by observations of the time that totality lasted by observers situated within two or three miles of the edges. Many persons used a stop watch or clock for this purpose and obtained the duration of the total eclipse with a maximum error of one second of time, which at such a position would give the location of the edge within a quarter of a mile if the edge of the moon were uniformly circular. If, however, there were a valley on the moon at the place where the edges of the moon and sun came into contact when totality began or ended, it would tend to shorten the time of the duration. Similarly, high ground at either of these places would tend to lengthen it. These valleys and hills, however, can probably be allowed for by examining maps of the moon. In any case, the observations add to our knowledge.

Information concerning the positions of these edges of the shadow can be used in two ways. The distance between the two edges depends on the diameters of the sun and moon and also on the distances of these bodies. What we are mainly concerned with at the time of an eclipse is, however, the apparent diameter of each, that is the size it appears to be to a person on the earth. The apparent size depends on the ratio of the diameter to the distance, and this is one of the main factors which gives the width of the shadow band at all eclipses. The distances of the bodies from the earth at different eclipses vary, but the variations are known with such accuracy that they can always be fully taken into account. The knowledge which may be gained by the exact determination of the distance between two edges will tell us whether the predictions of

the width of the shadow band on the earth at future eclipses should be increased or diminished. The present indication seems to be that it should be slightly diminished.

The second source of information is derived from the position of the central line of the shadow band, which may be taken to be half way between the northern and southern edges. The more exact knowledge of this line gives information as to the positions of the centers of the sun and moon at the time of the eclipse. The addition here is chiefly to our knowledge of the motion of the moon, especially at the times when the sun and moon are near together, since at such a time it is always difficult to observe the moon accurately.

The actual times at which the eclipse began or ended are needed with greater accuracy than is usually possible for anyone to obtain unless he is a trained astronomer. These were mainly left to the principal observatories in the shadow path to determine. The predictions, furnished in the first instance by the Nautical Almanac Office in Washington and in some cases tested at the observatories, were compared with the observations, and all showed that the eclipse was some few seconds late. The determinations received at the time of writing are as follows—with the number of seconds late in each case:

Ithaca	5.0
Poughkeepsie	2.5
New Haven (3 records, average)	5.7
Middletown	3.6
Easthampton, L. I.	5.5
Nantucket	5.0

The differences between these different determinations are probably due mainly to the ragged edge of the moon, in much the same way as that explained in the case of the

duration at the edges of the shadow. The average of them all — about five seconds — may be regarded as the error of the prediction which needs explanation.

As explained above, the correct prediction of an eclipse depends on our knowledge of many facts, some of which are better known than others. One of these is the position of the sun in the sky at any time. Usually it follows the predicted place very closely and when it does get away from it, the change is quite slow and regular. During the months before and following the eclipse the observations of the sun show that it had run ahead of the place predicted from the tables by about one second of arc. Small as this angle is, it is sufficient to account for two of the five seconds. A second factor is the position of the moon. This body, while it appears to deviate in a short period of time but little more than the sun, does so much more irregularly, and, though we have some knowledge of its motion near the time of the eclipse, this knowledge is not at the present moment sufficient to say whether it was ahead of or behind its schedule. We shall know more at a future date when the results of the campaign for its observation all over the world are available.

The other two factors in the situation about which there is doubt are the diameters of the sun and moon. It has already been mentioned that the width of the shadow path gives information about these, and this information is such that we have an explanation of at least one second more, and perhaps of two seconds. The path was narrower, indicating that the diameter of the moon used in the prediction was a little too small, or that of the sun a little too large, or perhaps both. Thus there are only two seconds at most to be attributed to the place of the moon in

her path, and this means that at most the moon was one second of arc away from her predicted place.

The Corona

The corona is one of the most elusive phenomena which nature presents, since it has never been seen except at the time when the face of the sun is covered by the moon. The difficulty in observing it at any other time is caused by the glare of the sun lighting up our atmosphere to such an extent that anything near the sun which is not very bright is quite blotted out. Its brightest part gives out only about the same light as the full moon, and this is many thousands of times less than that of the sun.

The corona appears to the eye as bright streamers of light extending in all directions away from the surface of the sun. These streamers are of different lengths and are not the same from one eclipse to another. They can sometimes be traced as far as three diameters of the sun from its surface, fading out gradually as we look further away. We know little about their cause, whether they move, or of what they are composed. On all these questions information is sought at the time of an eclipse.

One thing has been learned in the past. When the sun is frequently exhibiting spots on its surface, the corona is nearly equally extended in all directions, so that its outline to the eye is circular. But at times when there are few spots the coronal streamers appear to extend mainly from three or four areas so that it will have a quite irregular outline. The numbers of spots on the sun have been long observed and it is well known that there is a great outbreak of them about every eleven years, with periods in between when there are few or no spots. Thus the shape of the corona at any eclipse can be predicted to some ex-

tent. At the 1925 eclipse, it was foreseen that it would be nearly that which corresponded to a time of few spots and so it turned out.

Nevertheless, the record of the shape of the corona at each eclipse should be obtained for future study, more particularly since the time for obtaining it is so short. In earlier days before photography was a fully developed art, but little could be learned. Neither the professional astronomer nor the artist could give a picture which would serve for detailed study, in the few brief minutes during which it was visible. The early drawings are interesting if only to show what different impressions of its form could be obtained by those whose object was to make an accurate record of its size and shape. Photography has altered the situation completely. Pictures can be taken which may be developed and studied later. No one photograph is sufficient. A short exposure is necessary to show the details of the portions close to the surface of the sun, while a longer time is needed to bring out the fainter streamers further away from the surface.

So many possibilities of failing to get a record owing to cloudy skies were present that everyone who had a camera under a clear sky was asked to secure a photograph, and instructions were printed in the newspapers and elsewhere giving the times of exposure and other details. As a result, thousands of pictures of all kinds were taken, from the best to the worst. Even if the astronomers had failed to secure a single photograph with their special equipment, a complete record of the streamers could have been obtained from the work of the amateurs.

For the first time, moving picture operators made extensive preparations to secure films of the whole phenomenon. It is true that one or two attempts, one at least

successful, had been made at the eclipse of September, 1923. In 1925, however, the news producers as well as a few private individuals had their cameras pointed at the sun for the whole time. At the Yale Observatory, three were attached to telescopes with driving clocks which automatically kept the lenses pointed directly at the sun all the time. Fortunately, the skies were clear particularly at New Haven, Middletown, and Easthampton on Long Island, and some excellent reels were obtained by the professional observers. Two films were also secured from the airship *Los Angeles*.

Very little is known about the constitution or nature of the corona, and the only way at present of obtaining information is by an analysis of the light which it gives out. While it is perhaps generally recognized that we can know nothing about any celestial object except by means of the light which it sends to us, it is not realized that the rays would fail to give us information unless we had some means of relating them to the physical properties of the bodies. These relations have first to be carefully investigated in the laboratory, the laws which are found there being then applied to bodies which we cannot bring within our grasp. The most important of all the methods is the analysis of light by means of the prism, or by its more modern equivalent, the diffraction grating. Until it became known that every substance when heated gives out light which is characteristic of that substance and which is never the same as the light given out by a different substance, not much progress could be made. The same substance in the form of a gas will blot out the same colors which it will give out when heated. It is known further that matter treated in different ways will give out light of different colors.

An immense amount of work has been put on this subject by physicists. A large part of our knowledge of the nature of matter is derived from the investigation of the radiations which it sends out under different conditions.

Astronomy has not been slow in making use of this knowledge. The various devices used in the laboratory to examine the nature of the light given out by different substances are applied to the light received from celestial objects. Each instrument contributes its quota of information, and the assemblage of the results enables deductions to be made.

The fact that each substance gives out its own characteristic light first revealed the knowledge that a substance, not then known on the earth, existed in the sun. The non-committal name of helium was given to it. A painstaking search finally revealed it as existent on the earth and it is now used to fill our dirigibles. In the corona, there are certain colors — lines of light in the spectrum — which are not yet known to belong to any substance existing on the earth. The non-committal name of "coronium" has been given to this substance. It may be some known substance which exists near the sun in a condition which we have not yet been able to reproduce in the laboratory, or it may be some element which has not yet been discovered on the earth. The way of approach to knowledge concerning it is to obtain all the information possible by examination of the light at the time of an eclipse, and then to search in the laboratory until the same results are obtained.

It will thus be seen why, at the observatories, various astronomers concentrated their attention on different phases of the corona. Some had instruments which should give photographs of particular parts of its color scheme

or "spectrum" which, in the past, had not been sufficiently recorded, and some new "lines" were in fact obtained. Others were interested in measuring the intensity of the light at different distances from the sun's surface, and for this purpose the latest devices for measuring it were used. There were observations also of the intensity of the general sky-light during totality in different parts of the sky. Nearly all the devices used were designed to give photographic records which could be studied at leisure at a later time.

It will thus be seen that the eclipse is, in the main, the time when the facts are learned and that it may be months or years before these facts can be properly interpreted. The opening up of a new region may produce startling discoveries, its exploration is usually a process of gradual addition to our knowledge and of still more gradual deduction of the laws which govern the actions of the physical universe.

The Diamond Ring

This was an effect which was particularly noticed and photographed in New York City. Its general appearance was that of a faint circle of light with an intensely brilliant place at one spot, the rays from which spread out and gave the impression of a ring with a big diamond inserted in the usual way. It was somewhat of a surprise to many because little or no mention of its occurrence had been made in the descriptive articles appearing before the eclipse. Its beauty was a compensation for the absence of the onrush of the shadow.

The explanation is not difficult. The corona can be seen on the darkened edge of the sun several seconds before totality occurs — it was actually photographed some sixteen seconds before — and its faint light formed the ring.

If the edge of the moon had been smooth there would still have been a crescent of the sun visible and totality would have occurred by this crescent getting thinner and then suddenly disappearing by the two horns coming together. There was, however, some depression in the moon's surface through which the rays of the sun were still visible after the crescent had closed up, and the intensely brilliant "diamond" was this last sight of the sun's surface shining through a lunar valley. It lasted somewhat longer in New York because the edge of the shadow crossed that city and the moon was therefore grazing the edge of the sun for a longer time. The same phenomenon was, of course, easily visible at all places along the northern and southern edges of the shadow.

The Prominences

These flame-like appendages to the sun are always one of the characteristic sights of an eclipse. Their brilliant red coloring, the heights to which they rise above the surface, and the variety of the forms which they assume always add to the interest of the occasion. They are of less interest to the astronomer at this time, because he has been able to photograph them without needing the moon to blot out the rest of the sun's surface. They seem to be masses of gas, largely hydrogen, shot out from the surface, with velocities which sometimes reach hundreds of miles per second, to heights of hundreds of thousands of miles above the surface. Several were visible at the time of the eclipse. One was in the form of an arch with its crown some forty thousand miles high and a base of double that extent. Another looked like a big splash, and still another appeared to have just emerged from the surface, its outline being sharp and heavy.

The prominences differ from the corona not only in color but also in brightness. It is a fact well known to all photographers that the photographic plate is much less sensitive to red light than to blue. In spite of this fact, these structures are so bright that they not only impress their images very strongly on the photographs taken during totality, but these images "spread" on the negative, giving the appearance of a nick made in the edge of the moon. On large scale photographs this has to be distinguished from nicks which are caused by the irregularities of the edge of the moon.

The Flash Spectrum

When the sun's light is split up into a colored band by means of a prism, the band is seen to be crossed by thousands of black lines. These black lines are now known to mean that there are substances between us and the original source of the light which blot out or absorb the light at those particular places. As explained above, it is further known what substances cut off or absorb any particular part of the light, that is, those which produce the various black lines. We can therefore tell what materials constitute the outer envelope of the sun's surface. Below this envelope there is evidently matter which gives out the light. As the moon travels over the face of the sun at an eclipse, the light lessens, but the dark lines are still visible against the bright background. In the second before totality occurs, the whole appearance changes. The black lines suddenly become brighter than the background for a fraction of a second, and then change again, when totality occurs, to give the characteristic "spectrum" of the corona. It is this sudden brightening of the black lines which is called the "flash."

The photography of the flash spectrum, since it usually lasts for less than a second of time, requires great alertness on the part of the observer. He is prepared for it by the predicted time of totality, but must watch for its actual occurrence through another telescope and make his exposure only during the time it lasts. Some unusually successful plates showing it were secured at the eclipse and they seem to exhibit a number of bright lines which had not previously been recorded. The measurement of the exact positions of these will furnish more material for the physicist in the laboratory to be used for comparison. Professor H. D. Curtis, of the Allegheny Observatory at Pittsburgh, who brought his spectroscope to New Haven, reports a whole new range of bright lines recorded on the two plates which he secured, one just before and one just after totality. Here was a quite definite result of the 1925 eclipse which became known within a couple of months after the event occurred.

A knowledge of the flash spectrum is valuable because it gives information concerning the matter of the sun below the envelope which we see at ordinary times. The better the photographs the more we can learn concerning the materials which constitute this layer and the conditions under which they exist. Again this is a case of continued exploration of a region, previously partly known, which in the future may furnish more knowledge of the luminary on which we are so dependent, but for which we must wait until careful study has evolved the correct conclusions to be drawn from the observations.

The Einstein Effect

The theory of this effect demands that the light of a star should be slightly bent when it passes near the edge

of the sun, causing the star to be apparently slightly displaced away from the sun. It can be tested only at the time of an eclipse because stars sufficiently close to the sun can be photographed only at that time, owing to the glare caused by the sun when shining at its full strength. After such a photograph is secured, the same stars are again photographed when the sun has moved to another part of the sky. The careful measurements and comparisons of the distances between the stars on the two plates gives the amount of the displacement at the time of the eclipse.

The effect is so small that to measure it at all accurately, the conditions at the eclipse must be favorable. Stars bright enough to be well photographed during the brief time totality lasts must be present near the sun, and the atmospheric conditions must be such that their images on the photographic plate will be small and sharp. Neither of these favorable conditions existed at the time of this eclipse. The star field was poor, and as the sun was not very high in the sky but little confidence could be placed in measures which might be made on the plates. Thus no attempt was made to obtain any test of this nature.

The work done at two previous eclipses giving the predicted amount has removed most of the doubts as to the validity of the theory from the minds of the majority of astronomers. There are still, however, those who believe the effect may be due to refraction in the cone of shadow caused by the presence of the moon, and it was hoped that a test of this might be made by photographing the moon with the corona as a background and by measuring the plate to find out whether the diameter was altered sufficiently to account for the effect in the manner suggested. It is doubtful again whether plates sufficiently good for

this purpose have been secured. Such evidence as exists, gleaned from the observations of the duration of totality and the width of the shadow band, seem to negative this explanation.

The Shadow Bands

A complete programme for observation of this phenomenon was undertaken by members of the Faculty of Wesleyan University. This included not only observations in the usual way, but attempts to photograph them with a moving picture camera. The knowledge of the source of this picturesque appearance at the time of an eclipse has been increased to such an extent that it is doubtful if much work on them will be done by astronomers on future occasions.

It has long been supposed that the bands were due to motions of our atmosphere making irregular refraction in much the same way that a heated surface in summer makes objects appear to dance above it. The observations at Middletown showed that the bands were in some cases formed close to the ground and that they depended on swirls in the air caused by the wind. In one case they were observed chasing one another in all directions round a tree. In other cases they were quite poorly defined, just patches of light and shade, moving with all sorts of speeds and having different directions in different places. At previous eclipses, they seem to have had more regularity, probably because the air currents were a little more regular. It had been hoped that something about our atmosphere might be learned from them, but the explanation for their occurrence gives little hope of this.

The Radio Campaign

An extensive investigation was inaugurated and carried out by the staff of the "Scientific American Journal" with complete success. The following account is quoted from the issue of April, 1925:

The radio investigations attempted during the eclipse divide, more or less clearly, into three parts: First, a number of radio engineers, headed by Mr. Greenleaf W. Pickard, organized a network of instrumental receiving stations at Ithaca, New York; Leominster (about sixty miles west of Boston), Massachusetts; Middletown, Connecticut; and New York City. The last named station was at the laboratory of the Radio Corporation of America, in charge of Dr. Alfred N. Goldsmith.

At each of these stations a running record was made showing, instant by instant, the received field strength of two or more of the broadcasting stations: WGR, WGY, WBZ and WEAF. At New York City a record was made also of the reception from 2XI, the short-wave station of the General Electric Company at Schenectady, New York. These records ran for several hours before and after totality. Comparison records were made on preceding and following days.

In addition to this network, instrumental records of one or more broadcasting stations were made at the Bureau of Standards, Washington, D. C.; at the laboratories of the General Electric Company, Schenectady; by Mr. David Grimes, at Waterbury, Connecticut; by Mr. Albert Murray, at Newport, Rhode Island; by Professor Howard M. Fry of Lehigh University, Bethlehem, Pennsylvania; by the laboratories of F. A. D. Andrea, Inc., in New York City; by Mr. Joseph P. Bruell, in Brooklyn, New York; by the "Scientific American" (as described below) and by others.

The second group of observations included the tests made by the radio amateurs, using waves within the regular amateur band. Twenty amateur transmitters were on the ether and many other amateurs were told off to listen to one or more of these transmitting stations and to record any changes of intensity. These tests were organized by the American Radio Relay League.

The third part of the radio work was that with which the "Scientific American" was especially concerned, the organization of tests

by the radio listeners who volunteered to help. More than two thousand such listeners registered with us or with one or the other of the co-operating broadcasting stations. The majority of these listeners have sent in reports. In addition, we have received reports from several hundred persons who failed to hear of the tests in time to register but who listened on the morning of the eclipse and made records of what they heard.

The co-operating listeners had been divided previously into groups, each group instructed to listen to one or the other of these four stations. The listeners set down in their reports the work of the read copy at which the signals appeared to fade or to increase. Thus we have an exact time-check on all the changes that occurred, without depending on the accuracy of individual watches or clocks. The reading of the special-timed copy continued until 9:30 A. M., thus covering a period of forty-five minutes — about twenty minutes before the total part of the eclipse began, ten minutes during the eastward passage of the spot of totality, and fifteen minutes after totality was over.

In addition to our own tests, the Zenith Radio Corporation of Chicago, Illinois, sent their portable broadcasting station to Escanaba, Michigan, almost at the center of the path of totality, and transmitted programs for two evenings in advance of the eclipse as well as on the morning of the eclipse. Many listeners reported on the reception of this station and their reports have been kindly forwarded to us by the Zenith Company. Another portable station was sent out to sea on the Coast Guard Cutter Tampa by WEEI of Boston, Massachusetts, and recorded instrumentally by Mr. Murray, at Newport, as well as being heard by many listeners.

Still other tests along similar lines were conducted by broadcasting stations in other parts of the country. Reports on some of these stations, as well as on the four stations co-operating with us, have been collected by other agencies, notably by Mr. Charles H. VanHousen, Radio Editor of the Philadelphia "Evening Public Ledger." Finally, Mr. H. deA. Donisthorpe of the Marconi Company, New York City, kindly asked the operators of his company who happened to be on ships at sea near the path of totality, to observe any variation of radio signals from either side of the Atlantic.

That summarizes the data which we have to analyze. Complete study of it has not yet been possible. Some conclusions, however, begin to emerge.

There are many variations and contradictions. Some of these may be due to local disturbances or to accidental faults of the receivers. Some may have a deeper meaning which will be discoverable, doubtless, on further analysis. Ignoring these, for the present, and taking merely the rough average of the reported results we find:

Results Differ With Position

1. When listener and transmitter were on the *same* side of the shadow there was a gradual *increase* in signal strength, beginning about twenty minutes before totality and falling off again by about ten minutes after totality.

2. When listener and transmitter were on *opposite* sides of the shadow there was a *decrease* in signal strength beginning a few minutes before totality and lasting until well after totality.

3. When both listener and transmitter were *within* the shadow there was a relatively sharp *increase* in signal strength practically coincident with totality at the transmitting station. This fell off rather quickly after totality was over.

When both the transmitter and listener were very close to one side of the shadow path, although not actually within it, or when one was inside and one outside of the shadow, the results appear to approach, in general, to the type of group 2; that is, there was a decrease in signal strength as the shadow of the eclipse became nearly total.

This effect is illustrated by the results at the "Scientific American's" observing station, at Easthampton, Long Island. This station was well within the shadow. Transmissions were observed at intervals from WBZ and WOR but the effect in question appears most definitely from the record on WGY. This station, it will be noticed, was just north of the shadow path, so that the waves from it to Easthampton passed mainly through the area affected by the total shadow.

Received signals from WGY were recorded at Easthampton automatically. A Grebe Synchrophase receiver was tuned in on WGY early in the morning and was connected to a phonographic recording apparatus consisting of two standard Ediphone dictating machines, one telephone of the radio headset being attached to the mouthpiece of each Ediphone. By starting the second Ediphone just before the recording needle of the first Ediphone reached the end of the record, we were able to provide for changing records

and to obtain a phonographic record of the entire transmission, from 8:40 to 9:40 A. M.

It had been expected that the effect of the eclipse between these two stations would be the usual effect of darkness, that is, an increase of the signal strength. That did not happen. What we did record on the Ediphones was a decrease of signal strength. At 8:58 A. M., eleven minutes ahead of totality at the longitude of WGY and fourteen minutes ahead of totality at Easthampton, the signals faded from normal daylight strength to an intensity so low as to be without effect on the Ediphones although very faint signals could still be heard in the headphones. At approximately 9:35 A. M., twenty minutes after totality was over, the signals came back slowly to approximately normal daylight strength.

A possible explanation for this behavior emerges from the instrumental results of Mr. Pickard, as reported in preliminary manner before the Institute of Radio Engineers on February 4, 1925, and somewhat more completely by subsequent private communication to ourselves.

Radio engineers have suspected for some time that the normal transmission of radio waves is over a dual path. One of these, called the "direct path" or the "ground-wave path," is along the surface of the ground or of the water. This corresponds to the older "gliding wave" theory of radio transmission, the theory that assumed all transmission to be by a wave attached more or less firmly to the earth's surface, just as the waves of "wired radio" are attached to the wire along which they travel.

One Path High in Air

The other path believed to be followed by a part of the radiation is the so-called "indirect path" or "upper-wave path." This part of the energy is supposed to travel through the upper part of the earth's atmosphere; bent around the earth, perhaps, by the right combination of electric properties in this part of the atmosphere.

It has been found by Mr. Pickard, not only in this experiment but in many earlier ones, that the signal strength of a distant station, particularly at night, shows a great many momentary fluctuations, representing a short-period "swinging" or "fading." These are believed to be due to transient alterations in the length of the transmission path along the "upper" or "indirect" route of the wave. These variations cause the indirect part of the wave

alternately to reinforce and to oppose the direct part of the wave. Thus the audible or recordable variations are produced.

The eclipse occurred at an hour in the morning when these fluctuations were still prominent and in the instrumental records obtained, analysis shows that the indirect part of the wave was apparently affected more than was the direct part. The upper or indirect wave suffered so severely, it appears, as to be almost destroyed at some of the stations and for a part of the eclipse. The result was two-fold: First, the momentary fluctuations of the signal strength — the short-period fading — were smoothed out. Second, the total signal strength, being now due solely to the direct or ground wave, became much weaker than when both parts of the wave were arriving together and contributing to the field strength at the receiver.

Darkness Affects Ionization

It is easy to see how the upper, indirect wave might be interfered with by the eclipse. Darkness alters the ionization of the air. This, in turn, alters the speed of the wave. The alteration is not likely to be uniform. Accordingly the progress of the wave will be disturbed in a most complicated manner, with ample opportunity for such deviation of this wave, either upward or downward, as to greatly decrease its strength at the distant receiver.

In the case of a transmitting station inside the shadow path, as, for example, WGR, at Buffalo, there is another effect that enters. The indirect or upper part of the departing wave, in order to reach the upper atmospheric layer where the conductivity is higher and where the distant transmission is to occur, is compelled to traverse the layer of lower atmosphere lying immediately above the station, between the antenna and the upper, conducting layer. The absorption of wave energy in this lower part of the atmosphere is believed to be relatively high. It is probably higher when the air is illuminated by sunlight than when it is dark. Accordingly, it is probable that one effect of the eclipse was to decrease this absorption, thus allowing more of the wave energy to reach the upper, conducting layer, and strengthening the indirect part of the wave. It is possible that this explains the increased signal strength reported for cases in which both the transmitter and the receiver were within the total portion of the shadow of the moon.

Evidence from the portable station at Escanaba, Michigan, offers some confirmation. This station, too, was within the path of the

shadow. According to a report of results kindly supplied by Dr. R. H. G. Mathews, Chief Engineer of the Zenith Radio Corporation, listeners at a distance from Escanaba reported an increased range for that station during the eclipse period.

The frequent increase of signal strength reported when both transmitter and receiver were well outside the limits of the shadow is probably explainable merely as a partial night effect. Although the path of total shadow was limited, the rest of the United States experiences a partial eclipse. Over much of the country the approach to totality was more than ninety per cent. This corresponds to a considerable decrease in the intensity of sunlight. In effect, it was a partial night. Radio transmission is well known to be better at night than during the day. Although this may not be the whole truth about the effect of the partial phases of the eclipse on radio is is probably a part of the truth.

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What has been written in this chapter by no means completes the story of the eclipse. The scientific side is necessarily given only in broadest outline, even so far as it is known at the present moment. The less technical descriptions also might be expanded to a considerable extent without exhausting the material available for the interested historian. It would be difficult to name any two minutes in the world's history for which so many preparations were made and about which so much has appeared on the printed page. Whether it was worth the effort is a question which will naturally occur to the philosopher who is in the habit of contemplating the activities of humanity. The mathematician might reply by showing that the product of two minutes by ten millions of people gave an addition of forty years to the sum of human enjoyment and instruction! But the better answer is found in the thought that the people all together forgot their earthly concerns for a moment in order to receive a wider vision of the universe.